Micro
Informatique
Standards AMSTRAD

HORS SERIE
SPECIAL LISTINGS
CPC

- JEUX
- UTILITAIRES
- EDUCATIFS

PROGRAMMEZ TRANQUILLEMENT AVEC NOUS !



Anti erreurs



● Grégory NOE

Il est difficile de taper un programme d'une revue sans commettre d'erreurs ! Quand les erreurs sont signalées (Syntax error in..., Line does not exist in...), la correction est facile puisque la ligne est indiquée, mais lorsqu'au "point de vue" du CPC, le programme est correct, il peut en être tout autrement pour le lecteur :

Si le fonctionnement du programme ne correspond pas vraiment au programme original, alors il est impossible de retrouver l'erreur commise, à moins de comparer les lignes de votre programme avec celles du journal mais c'est très long et on risque de passer sur une erreur sans la voir.

C'est pourquoi ce programme a été créé ; il est à utiliser si vous ne retrouvez pas vos erreurs.

La frappe d'un programme de votre journal favori (CPC) terminée, vous faites "RUN" et là, vous corrigez toutes les erreurs signalées par le CPC en vous référant au journal pour comparer. Si, malgré cela, il ne tourne toujours pas, suivez cette procédure :

— sauvez votre programme en ASCII grâce à l'instruction : Save "nom prog", A.

Puis, si vous êtes sur K7, rebobinez la bande jusqu'au début du fichier ;

— chargez Anti-Erreurs ;

— entrez le nom de votre programme et insérez le support où il se trouve (K7 ou disquette).

Après quelques secondes, les numéros de ligne vont défiler. Vous remarquerez qu'à chaque ligne correspond un code de 2 lettres sous cette forme : >XX< ; c'est le code qui va vous permettre de savoir d'où proviennent les erreurs. Pour cela, il faut que vous compariez les codes du journal à ceux de l'écran. Si un code diffère, notez sur papier le numéro de ligne qui correspond à ce code. Continuez ainsi jusqu'à la fin du listage.

Le défilement terminé, recherchez votre programme et corrigez les lignes que vous avez notées en comparant avec le journal. Faites "RUN" et ô miracle ! ça marche.

Attention, lors de la frappe du programme à traiter, n'omettez aucun caractère (sauf les espaces) car Anti-Erreurs les prend en compte et bien sûr, ne tapez pas les codes de contrôle.



```
10   ****************************   >LA
20   #                          #   >LB
30   *     ANTI  -  ERREURS     *   >LC
40   #               _________  #   >LD
50   *             .VERSION 2.0 *   >LE
60 ' #                          #   >LF
70 ' ****************************   >LG
80 '                                >LH
90 ' (c) CPC & G. NOE 1987          >LJ
100 '                               >RB
110 '                               >RC
120 ' >>>>>>>>>>>>>>>>>>>>>>>>>>>   >RD
130 '      INITIALISATION       >   >RE
140 ' <<<<<<<<<<<<<<<<<<<<<<<<<<    >RF
150 '                               >RG
160 ON ERROR GOTO 1250              >QD
170 MODE 2                          >HH
180 DIM G$(23)                      >GD
190 FOR I=0 TO 22:READ G$:G$(I)=G$: >FR
NEXT
200 'ATTENTION LA LIGNE DE DATA CI- >RC
DESSOUS NE CONTIENT PAS TOUTES LES
LETTRES DE L'ALPHABET !!!
210 DATA A,B,C,D,E,F,G,H,J,K,L,M,N, >AD
P,Q,R,T,U,V,W,X,Y,Z
220   ANTI-BUG FICHIER              >RE
230 IF PEEK(HIMEM+1)=255 THEN 280   >ZD
240 OPENOUT "CPC"                   >MA
250 MEMORY HIMEM-2                  >NX
260 CLOSEOUT                        >RJ
270 POKE HIMEM+1,255                >PP
280 DEFINT B-Z                      >WH
290 '                               >TB
300 BORDER 6:INK 0,1:INK 1,16:PEN 1 >JN
:PAPER 0
310 MOVE 0,16:DRAW 650,16           >TK
320 PRINT TAB(27) "A N T I - E R R  >GU
E U R S    ";CHR$(24);"Version 2.0"
;CHR$(24)
330 MOVE 0,385:DRAW 650,385         >UJ
340 LOCATE 24,25:PRINT"CPC REVUE DE >EV
S STANDARDS AMSTRAD"
350 WINDOW 1,80,3,23                >NL
360 M$="Realise par Gregory NOE"    >HJ
370 F$=""                           >XA
380 FOR I=1 TO LEN(M$)              >PU
390 F$=F$+MID$(M$,I,1)              >FL
400 LOCATE 70-I,5:PRINT F$          >UL
410 FOR T=1 TO 100                  >LQ
420 NEXT T,I                        >EF
430 '                               >RH
440   ****************************  >RJ
****
450                                 >RK
460 LOCATE 2,1:PRINT"ENTREZ LE NOM  >XT
DU FICHIER : ";
470 INPUT "",NF$                    >FD
480 IF NF$="" THEN PRINT CHR$(7):GO >GR
TO 460
490 LOCATE 2,3:PRINT"IMPRIMANTE OU  >VR
ECRAN (I/E)?"
500 R$="":WHILE R$="":R$=UPPER$(INK >NK
EY$):WEND
510 IF R$="I" THEN CA=8:PRINT"BRANC >XD
HEZ-LA..." ELSE 540
520 PRINT#8,CHR$(27);"!";CHR$(20)   >AR
530 GOTO 560                        >ZF
540 IF R$="E" THEN CA=0:GOTO 560    >YQ
550 GOTO 500                        >ZB
560 CLS:LOCATE 2,3:PRINT"TANT QUE L >QR
E LISTAGE N'EST PAS TERMINE"
570 LOCATE 2,5:PRINT"NE PAS ARRETER >JW
 LE MAGNETOPHONE OU NE"
580 LOCATE 2,7:PRINT"PAS SORTIR LA  >TL
DISQUETTE"
590 LOCATE 2,10:PRINT"PRESSEZ UNE T >HH
OUCHE POUR LA LECTURE"
600 CALL &BB05                      >LH
610 '                               >RH
620 ' <<<<<<<<<<<<<<<<<<<<<<<       >RJ
```

```
630 '< TRAITEMENT DU FICHIER >         >RK
640 ' >>>>>>>>>>>>>>>>>>>>>>>          >TA
650                                    >TB
660 OPENIN "!"+NF$                     >LF
670 CLS:PRINT"TRAITEMENT EN COURS..    >JR
."
680 IF LEN(A$)=255 THEN A$="":LINE     >YW
INPUT#9,B$:GOTO 1160
690 LINE INPUT#9,B$:A$=B$              >UE
700 IF CA<>8 THEN GOSUB 1310           >VF
710 IF INKEY(66)=0 THEN STOP           >WN
720                                    >RK
730 '     CALCUL DE LA CLE DE CONTRO   >TA
LE
740 '                                  >TB
750 A=0:FLG=0                          >MB
760 FOR I=1 TO LEN(A$)                 >PH
770 L$=MID$(A$,I,1)                    >MU
780 IF L$=CHR$(34) AND FLG=1 THEN F    >PC
LG=0:GOTO 840
790 IF L$=CHR$(34) AND FLG=0 THEN F    >PD
LG=1:GOTO 840
800 IF L$=CHR$(32) AND FLG<>1 THEN     >CX
850
810 IF L$=CHR$(39) AND FLG=0 THEN 8    >CA
60
820 IF FLG=1 THEN 840                  >ND
830 L$=UPPER$(L$)                      >MC
840 A=A+ASC(L$)+I                      >LU
850 NEXT I                             >P8
860 '                                  >TE
870 CH$=STR$(A)                        >CC
880 CH$=RIGHT$(CH$,LEN(CH$)-1)         >YC
890 L=LEN(CH$):L2=LEN(CH$)/2           >XA
900 A=VAL(LEFT$(CH$,L2))               >TY
910 C=INT(A/23)                        >AH
920 P=A-(C*23)                         >LJ
930 C$=G$(P)                           >XC
940 A=VAL(RIGHT$(CH$,L-L2))            >WH
950 C=INT(A/23):P=A-(C*23)             >UT
960 C$=C$+G$(P)                        >TD
970                                    >TG
980 FOR I=1 TO 6                       >WK
990 L$=MID$(A$,I,1)                    >MY
1000 IF L$<"0" OR L$>"9" THEN 1030     >XJ
1010 LI$=LI$+L$                        >XF
1020 NEXT                              >KE
1030 VM$="":FOR I=1 TO LEN(A$):IF A    >EK
SC(MID$(A$,I,1))<32 THEN VM$=VM$+"
" ELSE VM$=VM$+MID$(A$,I,1)
1040 NEXT I:B$=VM$                     >MW
1050                                   >XJ
1060 IF CA<>8 THEN 1070 ELSE 1090      >YT
1070 PRINT LI$;TAB(10) ">";C$          >WZ
1080 LI$="":GOTO 1160                  >ND
1090 LI$="":PRINT#CA,LEFT$(B$,55);T    >QM
AB(57) ">";C$
1100 IF LEN(B$)<55 THEN 1160           >UT
1110 FG=1                              >CG
1120 B$=MID$(B$,56,LEN(B$))            >UB
1130 PRINT#CA,LEFT$(B$,55)             >VW
1140 IF FG=1 AND CA<>8 THEN FG=0:GO    >VB
SUB 1310:GOTO 1150
1150 GOTO 1100                         >LG
1160 IF EOF=-1 THEN CLOSEIN ELSE GO    >HO
TO 680
1170 IF CA=0 THEN CALL &BB03:PRINT     >RJ
TAB(50) CHR$(24);"UNE TOUCHE...";CH
R$(24):CALL &BB05
1180 CLS:PRINT"MAINTENANT RECHARGEZ    >JC
 ";NF$;" ET CORRIGEZ LES LIGNES QUE
 VOUS AVEZ NOTEES.."
1190 END                               >YK
1200                                   >XF
1210 <<<<<<<<<<<<<<<<<<<<<<<<<<        >XG
1220 < TRAITEMENTS DES ERREURS >       >XH
1230 ' <<<<<<<<<<<<<<<<<<<<<<<<        >XJ
1240                                   >XK
1250 IF ERR=25 THEN CLS:PRINT CHR$(    >YC
7);CHR$(24);"FICHIER NON ASCII";CHR
$(24):END ELSE CONT
1260                                   >Y8
1270  <<<<<<<<<<<<<<<<<<<<<<<<         >YC
1280 '     ATTENTE TOUCHE...    >      >YD
1290  <<<<<<<<<<<<<<<<<<<<<<<<         >YE
1300                                   >XG
1310 COM=COM+1:IF COM>19 THEN CALL     >AF
&BB03:PRINT TAB(50) "UNE TOUCHE..."
:CALL &BB05:CLS:COM=1
1320 RETURN                            >EK
```

TURBO-CLAVIER

Valable pour
CPC 464
CPC 664
CPC 6128

Christian KEHREN

Turbo-Clavier, présenté ici, a pour but de vous faciliter la saisie de tous vos listings BASIC Amstrad 464, 664 et 6128.
Vous tapiez tous les ordres BASIC courant lettre par lettre ? Plus maintenant ! Après avoir saisi ce petit listing, toutes les touches du pavé numérique vous donneront les fonctions principales.
De plus, en combinant la touche CTRL (contrôle) avec certaines lettres, vous obtiendrez tous les ordres d'édition et d'entrée-sortie.
Après son exécution, Turbo-Clavier s'efface de la mémoire, laissant toute la place nécessaire à votre programme.
D'après son auteur, son utilitaire a été testé par trois programmeurs pendant plus d'un an pour être le plus ergonomique possible.
Espérons que vous le trouverez pratique et efficace.

```
10 REM * UTILITAIRE CLAVIER *                                  >XF
20 MODE 2:S=26:P=1:INK 1,S:INK 0,P:BORDER P                    >LM
30 CLS:LOCATE 20,1:PRINT CHR$(24);" QUEL ECRAN VOULEZ-VOUS UTILISER : ";CHR$(24):LOCATE 30,6:PRINT CHR$(24);" [N] ";CHR$(24);" - NOIR"   >HF
40 LOCATE 30,9:PRINT CHR$(24);" [B] ";CHR$(24);" - BLANC":LOCATE 30,12:PRINT CHR$(24);" [O] ";CHR$(24);" - ORANGE":LOCATE 30,15:PRINT CHR$(24);" [V] ";CHR$(24);" - VERT"   >FW
50 LOCATE 30,18:PRINT CHR$(24);" [C] ";CHR$(24);" - AUTRE COULEURS":LOCATE 30,21:PRINT CHR$(24);" [RETURN] ";CHR$(24);" - FIN"   >FJ
60 CALL &BB18:IF INKEY(46)<>-1 THEN BORDER 0:INK 0,0:INK 1,23:GOTO 60   >PC
70 IF INKEY(54)<>-1 THEN BORDER 13:INK 0,13:INK 1,0:GOTO 60    >BD
80 IF INKEY(55)<>-1 THEN BORDER 9:INK 0,9:INK 1,0:GOTO 60      >ZH
90 IF INKEY(34)<>-1 THEN BORDER 15:INK 0,15:INK 1,0:GOTO 60    >BH
100 IF INKEY(62)<>-1 THEN 700                                  >WE
110 IF INKEY(18)<>-1 THEN SOUND 1,50,20:SOUND 1,150,20:SOUND 1,80,30:GOTO 130   >AT
120 PRINT CHR$(7):GOTO 20                                      >TC
130 CLS:PRINT" ORDRES PROGRAMMES EN MAJUSCULE OU MINUSCULE ( M:MAJUSCULE - MIN.: autre ): ?"   >NU
140 CALL &BB18:IF INKEY(38)<>-1 THEN CLS:GOTO 420              >RD
150 CLS                                                        >UA
160 KEY 135,"goto "                                            >PA
170 KEY 136,"gosub "                                           >DC
180 KEY 137,"return"                                           >RA
190 KEY 132,"for "                                             >MY
200 KEY 133,"to "                                              >LW
210 KEY 134,"next "                                            >PB
220 KEY 129,"if "                                              >LG
230 KEY 130,"then "                                            >NQ
240 KEY 131,"else "                                            >NL
250 KEY 128,"step "                                            >PF
260 KEY 138,"chr$("                                            >NB
270 KEY 139,"print"                                            >PY
280 KEY 140,"load"+CHR$(34)                                    >WQ
290 KEY DEF 58,1,101,69,141:KEY 141,"edit ": E                 >LN
300 KEY DEF 36,1,108,76,142:KEY 142,"list ": L                 >LG
310 KEY DEF 69,1,97,65,143:KEY 143,"auto ":'A                  >YD
320 KEY DEF 62,1,99,67,144:KEY 144,"cls":'C                    >HP
330 KEY DEF 50,1,114,82,145:KEY 145,"run ": R                  >KE
340 KEY DEF 35,1,105,73,146:KEY 146,"call &BC02"+CHR$(13)      >AM
350 KEY DEF 60,1,115,83,147:KEY 147,"save"+CHR$(34)            >UJ
360 KEY DEF 61,1,100,68,148:KEY 148,"cat"+CHR$(13)             >TF
370 KEY DEF 68,1,149,208,228:KEY 149,"locate"                  >NZ
380 KEY DEF 9,1,&E0,206,207                                    >TZ
390 KEY DEF 38,1,109,77,150:KEY 150,"mode "                    >KR
400 PRINT SPC(3)+CHR$(24);"TURBO-CLAVIER - Version 2.3 - 1987 - KEHREN CHRISTIAN ";CHR$(24);" ... a votre service !":PRINT   >TR
410 DELETE 10-                                                 >NG
420 REM * MAJUSCULES *                                         >QP
430 KEY 135,"GOTO "                                            >MD
440 KEY 136,"GOSUB "                                           >NW
450 KEY 137,"RETURN"                                           >PJ
460 KEY 132,"FOR "                                             >LC
470 KEY 133,"TO "                                              >GH
480 KEY 134,"NEXT"                                             >MJ
490 KEY 129,"IF "                                              >FE
500 KEY 130,"THEN "                                            >MK
510 KEY 131,"ELSE "                                            >MF
520 KEY 128,"STEP "                                            >MJ
530 KEY 138,"CHR$("                                            >MF
540 KEY 139,"PRINT"                                            >NH
550 KEY 140,"LOAD"+CHR$(34)                                    >UU
560 KEY DEF 58,1,101,69,141:KEY 141,"EDIT "                    >JF
570 KEY DEF 36,1,108,76,142:KEY 142,"LIST "                    >JJ
580 KEY DEF 69,1,97,65,143:KEY 143,"AUTO "                     >HG
590 KEY DEF 62,1,99,67,144:KEY 144,"CLS"                       >FE
600 KEY DEF 50,1,114,82,145:KEY 145,"RUN "                     >HH
610 KEY DEF 35,1,105,73,146:KEY 146,"CALL &BC02"+CHR$(13)      >ZG
620 KEY DEF 60,1,115,83,147:KEY 147,"SAVE"+CHR$(34)            >TD
630 KEY DEF 61,1,100,68,148:KEY 148,"CAT"+CHR$(13)             >RK
640 KEY DEF 68,1,149,208,228:KEY 149,"LOCATE"                  >LH
650 KEY DEF 9,1,&E0,206,207                                    >TZ
660 KEY DEF 38,1,109,77,150:KEY 150,"MODE "                    >JL
670 PRINT SPC(3);CHR$(24);"TURBO-CLAVIER - Version 2.3 - 1987 - KEHREN CHRISTIAN ";CHR$(24);" ... a votre service !":PRINT   >TU
680 DELETE 10-                                                 >PF
690 END                                                        >TJ
700 ' * Autres couleurs *                                      >RH
710 CLS:LOCATE 30,6:PRINT CHR$(24);" ";CHR$(242);" ";CHR$(24);" & "+CHR$(24);" ";CHR$(243);" ";CHR$(24);" - STYLO"   >NU
720 LOCATE 30,10:PRINT CHR$(24);" ";CHR$(240);" ";CHR$(24);" & "+CHR$(24);" ";CHR$(241);" ";CHR$(24);" - PAPIER"   >HX
730 LOCATE 30,14:PRINT CHR$(24);" RETURN ";CHR$(24);" - FIN"   >FG
740 LOCATE 25,20:PRINT "STYLO : ";CHR$(24);S;CHR$(24);"  - PAPIER : ";CHR$(24);P;CHR$(24)   >XL
750 CALL &BB18                                                 >MH
760 IF INKEY(8)<>-1 AND S<26 THEN S=S+1:INK 1,S                >NX
770 IF INKEY(1)<>-1 AND S>0 THEN S=S-1:INK 1,S                 >MV
780 IF INKEY(0)<>-1 AND P<26 THEN P=P+1:INK 0,P:BORDER P       >ZY
790 IF INKEY(2)<>-1 AND P>0 THEN P=P-1:INK 0,P:BORDER P        >YX
800 IF INKEY(18)<>-1 THEN 30                                   >VJ
810 LOCATE 25,20:PRINT "STYLO : ";CHR$(24);S;CHR$(24);"  - PAPIER : ";CHR$(24);P;CHR$(24)   >XJ
820 GOTO 750                                                   >ZJ
```



TURBO CLAVIER

Pour CPC 6128 et 664

CLAVIER

CTRL + E : Edit
CTRL + L : List
CTRL + A : Auto
CTRL + C : Cls
CTRL + I : Init. couleurs
CTRL + S : Save"
CTRL + D : Dir (catalogue)
CTRL + M : Mode
CTRL + R : Run
CTRL + ENTER : Load"
CTRL + COPY : noirures graphiques
CTRL + TAB : cœur graphique
SHIFT + TAB : ligne graphique
SHIFT + COPY : damier graphique
TAB : locate

PAVE NUMERIQUE

.	:	chr$(
f0	:	step
f1	:	if
f2	:	then
f3	:	else
f4	:	for
f5	:	to
f6	:	next
f7	:	goto
f8	:	gosub
f9	:	return

TURBO CLAVIER

Pour CPC 6128 et 664

CLAVIER

CTRL + E : Edit
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SHIFT + COPY : damier graphique
TAB : locate

PAVE NUMERIQUE

.	:	chr$(
f0	:	step
f1	:	if
f2	:	then
f3	:	else
f4	:	for
f5	:	to
f6	:	next
f7	:	goto
f8	:	gosub
f9	:	return

TABLEAU DES CARACTERES DE CONTROLE

```
PRINT CHR$(1);
CHR$(code ASCII)
```

0	□		20	◷	T
1	┌	A	21	✕	U
2	⊥	B	22	⎍	V
3	┘	C	23	⊣	W
4	⚡	D	24	⧗	X
5	⊠	E	25	♦	Y
6	✓	F	26	⸮	Z
7	Ω	G	27	⊖	[
8	←	H	28	◰	\
9	→	I	29	◱	]
10	↓	J	30	◲	↑
11	↑	K	31	◳	_
12	↡	L	32		
13	↵	M	33	!	
14	⊗	N	34	"	
15	⊙	O	35	#	
16	⊟	P	36	$	
17	◔	Q	37	%	
18	◑	R	38	&	
19	◕	S	39	'	

Voici enfin le tableau de référence sur les caractères de contrôle. En effet, certains listings peuvent contenir des signes bizarres qui vous sont inconnus. Reportez-vous à ce tableau qui sera valable dans tous les cas de figures.

Le listing Intruder contient trois de ces étranges signes : la flèche en haut et flèche en bas ainsi que le classique contrôle X.



THE INTRUDER

Xavier GROSSETETE

Au fin fond de l'univers, une nouvelle bataille... vous attend. Seul, face à une horde d'envahisseurs surgis de l'immensité intersidérale, vous assurez courageusement la défense de votre univers.



Du haut de l'écran apparaît le vaisseau mère - hors de portée - larguant successivement des vaisseaux rebelles qui, lentement, inexorablement, descendent vers vous.
Votre tir doit être stratégique et vous devrez faire mouche à chaque fois pour arriver jusqu'au vaisseau mère. Ultime challenge à surmonter.
D'une bonne présentation avec sa musique rythmée, ce jeu reste simple mais très difficile à tenir au niveau 3. A vos joysticks ou claviers !
Le premier listing (optionnel) vous donne la page de présentation et charge le jeu lui-même (deuxième listing à sauver sous le nom d'INTRUDER).
Attention aux datas de redéfinition de caractères, ainsi que la partie de routines en langage machine comprise entre les lignes 4380 à 4470. Je vous conseille vivement de sauvegarder votre travail avant de lancer celui-ci car, en cas d'erreur dans les datas, le plantage irrémédiable vous ferait perdre toutes vos heures de frappes.

LISTING 1

```
1 '******************************   >FA
2 '*                            *   >FB
3 '*      LOADER  INTRUDER      *   >FC
4 '*                            *   >FD
5 '*     (c)BIGHEAD SOFTWARE    *   >FE
6 '*                            *   >FF
7 '******************************   >FG
10 MODE 0:INK 0,0:BORDER 0:INK 1,15 >PE
:INK 3,14:INK 4,25:INK 5,10:INK 6,7
:INK 7,6:INK 8,20:INK 10,2:INK 9,26

11 EVERY 10,1 GOSUB 500              >QA
20 SYMBOL AFTER 32                   >MN
21 SYMBOL 68,112,120,108,102,102,12 >FU
6,124
22 SYMBOL 69,112,96,120,120,96,124, >DT
126
23 SYMBOL 72,68,100,102,126,126,102 >EH
,102
24 SYMBOL 73,16,24,24,24,24,24,24    >ZD
25 SYMBOL 78,66,102,118,126,102,102 >ET
,102
26 SYMBOL 82,120,100,100,120,104,10 >FZ
2,102
27 SYMBOL 84,126,126,24,24,24,24,12 >BY
28 SYMBOL 85,68,102,102,102,102,126 >ET
,124
40 SYMBOL 141,0,0,0,0,0,0,8,29       >NG
50 SYMBOL 142,0,0,0,0,0,0,0,128      >XC
60 SYMBOL 143,0,3,31,63,255,254,248 >EX
,240
70 SYMBOL 144,127,255,255,254,128,1 >JH
28,96,31
80 SYMBOL 145,224,240,252,126,62,14 >HL
,31,231
90 SYMBOL 146,240,255,255,255,72,35 >GZ
,61,66
100 SYMBOL 147,0,0,255,255,63,143,6 >FH
4,127
110 SYMBOL 148,15,255,254,253,225,1 >KC
5,121,146
111 SYMBOL 149,64,96,80,40,20,55,52 >DP
,23
112 SYMBOL 150,0,0,0,0,3,254,3,254   >AE
113 SYMBOL 151,0,0,0,0,128,96,248,1 >BY
4
114 SYMBOL 152,48,48,57,79,244,6     >YB
115 SYMBOL 153,0,1,255,224           >TZ
116 SYMBOL 154,254,252,240,64,224    >ZN
120 A$=" "+CHR$(141)+CHR$(142)+CHR$ >YF
(10)+CHR$(8)+CHR$(8)+CHR$(8)+CHR$(1
43)+CHR$(144)+CHR$(145)+CHR$(10)+CH
R$(8)+CHR$(8)+CHR$(8)+CHR$(146)+CHR
$(147)+CHR$(148)
121 NAV$=CHR$(149)+CHR$(150)+CHR$(1 >PC
51)+CHR$(10)+CHR$(8)+CHR$(8)+CHR$(8
)+CHR$(152)+CHR$(153)+CHR$(154)
130 FOR ETOILE=1 TO 100              >QF
140 X=INT(RND*640)                   >NF
150 Y=INT(RND*400)                   >NB
160 PLOT X,Y,INT(RND*15)+1           >VH
170 NEXT                             >ED
180 FOR T=1 TO 5:MOVE 30,T:DRAW 610 >LE
,T,1:NEXT
190 FOR T=6 TO 20:MOVE 30,T:DRAW 61 >MZ
0,T,2:NEXT
200 FOR T=20 TO 22:MOVE 30,T:DRAW 6 >NK
10,T,9:NEXT
210 FOR T=1 TO 8:MOVE T,26:DRAW T,3 >MF
74,1:NEXT
220 FOR T=8 TO 20:MOVE T,26:DRAW T, >MH
374,2:NEXT
230 FOR T=20 TO 22:MOVE T,26:DRAW T >NB
,374,9:NEXT
240 FOR T=616 TO 620:MOVE T,26:DRAW >QC
 T,374,9:NEXT
250 FOR T=620 TO 632:MOVE T,26:DRAW >QU
 T,374,2:NEXT
260 FOR T=632 TO 636:MOVE T,26:DRAW >RY
 T,374,10:NEXT
270 FOR T=394 TO 400:MOVE 30,T:DRAW >RE
 610,T,10:NEXT
280 FOR T=382 TO 392:MOVE 30,T:DRAW >QT
 610,T,2:NEXT
290 FOR T=378 TO 380:MOVE 30,T:DRAW >QD
 610,T,9:NEXT
300 X=20:FOR T=1 TO 22:MOVE T,X:DRA >AT
W T,20,10:X=X-1:NEXT
310 X=380:FOR T=1 TO 22:MOVE T,X:DR >CQ
AW T,380,10:X=X+1:NEXT
320 X=380:FOR T=618 TO 636:MOVE T,3 >HB
80:DRAW 618,X,10:X=X+1:NEXT
330 X=1:FOR T=618 TO 636:MOVE T,20: >CY
DRAW T,X,10:X=X+1:NEXT
340 R=300                            >CC
341 X=0:Y=0:ORIGIN 0,0,30,640,30,40 >CK
0
342 Z=R^2:FOR D=0 TO R STEP 4:D1=SQ >MA
R(Z-(D^2)):PLOT X+D,Y+D1,2:DRAW X+D
,Y-D1,6:NEXT
343 FOR A=0 TO 200 STEP 10           >RE
344 PLOT INT(RND*300),INT(RND*300), >EG
0
345 NEXT                             >EH
```



```
380 PRINT CHR$(22)+CHR$(1)                >UM
390 PEN 9                                 >BD
400 LOCATE 2,9:PRINT A$                   >RN
410 LOCATE 3,16:PRINT A$                  >TG
420 LOCATE 4,21:PRINT A$                  >TE
430 LOCATE 5,13:PRINT USING"&";A$         >BA
440 LOCATE 10,5:PRINT USING"&";NAV$       >DJ

450 PEN 10:LOCATE 12,8:PRINT "THE":       >WM
PEN 12:LOCATE 10,10:PRINT "INTRUDER
"
460 PEN 0:LOCATE 2,25:PRINT USING"&       >YT
";CHR$(164)+"BIGHEAD  SOFTWARE":PEN
 1
461 FOR t=1 TO 540:NEXT t                 >TW
470 RUN"!INTRUDER                         >NQ
500 READ B                                >JB
510 IF B=-1 THEN RESTORE 540:GOTO 5       >DW
00
520 SOUND 2,B,20,15:SOUND 1,B+1,20,       >YK
15:SOUND 4,B+2,20,15
530 RETURN                                >ZD
540 DATA 190,175,169,159,190,179,16       >NV
9,159,95,95,106,0,106,95,95,106,119
,127,119,127,142,106,127,159,190,17
9,169,159,190,179,169,159,96,96,106
,119,159,190,159,190,239,142,179,21
3,179,213,253,239,-1
```

LISTING 2

```
10 '*********************                 >LA
20 '*                    *                >LB
30 '*    THE INTRUDER    *                >LC
40 '*                    *                >LD
50 '*    (c) BIGHEAD     *                >LE
60 '*        SOFTWARE    *                >LF
70 '*        1987        *                >LG
80 '*                    *                >LH
90 '*********************                 >LJ
100 TAGOFF:PRINT CHR$(23)+CHR$(0)         >BB
110 MODE 0                                >GK
120 T1$="Z"+CHR$(242):T2$=CHR$(243)       >UD
+"X":F$="ESPACE"
130 GOTO 1630                             >FB
140 INK 0,0:BORDER 0                      >NA
150 MODE 0:SPEED INK 50,50                >TY
160 FOR I=1 TO 15:INK 1,0:NEXT 1          >YW
170 GOSUB 400                             >HB
180 '*********************                >RK
190 '*        DECORS      *               >TA
200 '*********************                >RC
210 FOR y=80 TO 350 STEP 5:PLOT RND       >JJ
*638,y,9:IF RND>=0.5 THEN color=4:P
LOT XPOS+color,y,10 ELSE color=-4:P
LOT XPOS+color,y,10
220 NEXT                                  >DK
230 PRINT CHR$(22)+CHR$(1)                >UF
240 PEN 13:LOCATE 1,22:PRINT STRING       >UN
$(20,CHR$(214))
250 PEN 2:LOCATE 1,22:PRINT STRING$       >TT
(20,CHR$(215))
260 LOCATE 1,25:FOR i=248 TO 253:PR       >MD
INT CHR$(1);:NEXT:PEN 9:PAPER 0
270 PEN 6:LOCATE 13,25:PRINT USING"       >WN
&";"INTRUDER";:                             /
280 LOCATE 1,1                            >PG
290 PRINT CHR$(22)+CHR$(0)                >UL
300 INK 1,6:INK 2,11:INK 3,3:INK 4,       >PG
15:INK 5,18:INK 6,11:INK 7,22:INK 8
,26:INK 9,26,0:INK 10,0,26:INK 13,2
:INK 14,26:INK 11,26:INK 15,0
310 LOCATE 1,1                            >PA
320 GOSUB 4420                            >PG
330 x=300                                 >CH
340 cx=8                                  >ZF
350 x1=8                                  >XJ
360 B=0                                   >NC
370 c=-5                                  >VC
380 po=62999                              >DE
390 GOTO 720                              >ZH
400 '*********************                >RE
410 '* REDEFINITION CARAC.*               >RF
420 '*********************                >RG
430 SYMBOL 236,1,1,15,15,1,1,1,1          >YT
440 SYMBOL 237,128,128,240,240,128,       >MD
128,128,128
450 SYMBOL 238,7,8,16,32,64,255,128       >ET
,255
460 SYMBOL 239,224,16,8,4,2,255,1,2       >CE
55
470 SYMBOL 240,0,24,60,189,255,255,       >HE
153,129
480 SYMBOL 241,0,0,0,63,64,64,63          >YV
490 SYMBOL 242,0,126,129,126,0,0,25       >FJ
5,255                                       /
500 SYMBOL 243,0,0,0,252,2,2,252          >YX
510 SYMBOL 248,240,144,128,240,16,1       >KZ
6,144,240
520 SYMBOL 249,0,0,240,144,128,128,       >HK
144,240
530 SYMBOL 250,0,0,240,144,144,144,       >HY
144,240
540 SYMBOL 251,0,0,160,208,208,128,       >HN
128,128
550 SYMBOL 252,0,0,240,144,240,128,       >HD
128,240
560 SYMBOL 253,0,0,240,0,0,240            >WT
570 SYMBOL 150,7,&1F,&3F,&7F,&7F,25       >KZ
5,255,255
580 SYMBOL 151,&E0,&F8,&FC,&FE,&FE,       >NN
255,255,255
590 SYMBOL 152,255,255,&CF,&47,&63,       >LU
&33,&1F,&7
600 SYMBOL 153,255,255,255,254,254,       >MU
&FC,&F8,&E0
610 SYMBOL 48,24,36,36,0,36,36,24         >ZK
620 SYMBOL 49,0,4,4,0,4,4                 >TK
630 SYMBOL 50,24,4,4,24,32,32,24          >YM
640 SYMBOL 51,24,4,4,24,4,4,24            >WG
650 SYMBOL 52,0,36,36,24,4,4              >VB
660 SYMBOL 53,24,32,32,24,4,4,24          >YU
670 SYMBOL 54,24,32,32,24,36,36,24        >AR
680 SYMBOL 55,24,4,4,0,4,4                >TA
690 SYMBOL 56,24,36,36,24,36,36,24        >AE
700 SYMBOL 57,24,36,36,24,4,4,24          >YB
710 RETURN                                >ZD
720 '*********************                >RK
730 '* BOUCLE PRINCIPALE  *               >TA
740 '*********************                >TB
750 IF INKEY(touche1)=0 AND x>-2 TH       >WG
EN x=x-16:po=po-2
760 IF INKEY(touche2)=0 AND x<603 T       >YD
HEN x=x+16:po=po+2
770 TAG                                   >UC
780 PLOT -10,-10,6:MOVE x-32,40:PRI       >YF
NT" ";CHR$(240);" ";
790 IF INKEY(touche3)=0 THEN GOSUB        >GG
1520
800 PLOT RND*638,350,9:IF RND>=0.5        >DD
THEN color=4:PLOT XPOS+color,350,10
 ELSE color=-4:PLOT XPOS+color,350,
10
810 FOR I=62960 TO 63000 STEP 2:f=P       >GG
EEK(I):IF f>0 THEN GOSUB 1120
820 NEXT                                  >EF
830 IF INKEY(27)=0 THEN TAGOFF:PEN        >FP
5:LOCATE 13,25:PRINT USING"&";"PAUS
E  ";:CALL &BB06:CALL &BB06:CALL &
BB06:PEN 6:LOCATE 13,25:PRINT USING
"&";"INTRUDER";:TAG
840 CALL &7000                            >HK
850 IF INKEY(touche1)=0 AND x>-2 TH       >WH
EN x=x-16:po=po-2
860 IF INKEY(touche2)=0 AND x<603 T       >YE
HEN x=x+16:po=po+2                          /
870 PLOT -10,-10,6:MOVE x-32,40:PRI       >YF
NT" ";CHR$(240);" ";
880 IF INKEY(touche3)=0 THEN GOSUB        >GG
1520
890 FOR i=63000 TO 63038 STEP 2:f=P       >GM
EEK(i):IF f>0 THEN GOSUB 1120
900 NEXT                                  >EE
910 IF n=2 THEN CALL &7000                >TC
920 IF n=3 THEN CALL &7000:CALL &70       >CD
00
930 x1=x1+cx                              >HD
940 b=B+1                                 >CD
950 c=C+1                                 >CG
```



```
960 PLOT -10,-10,4:MOVE x1,380:PRIN >ZD
T " ";CHR$(241);CHR$(242);CHR$(243)
;" ";
970 IF sc=1000 THEN TAGOFF:PEN 1:LO >RJ
CATE 13,25:PRINT USING"&";"BONUS'#'
";:FOR bonus=sc TO sC+490 STEP 10:L
OCATE 7,25:PEN 5:PRINT bonus:SOUND
1,60,2,7:NEXT:sc=bonus:LOCATE 13,25
:PEN 6:PRINT USING"&";"INTRUDER";:T
AG
980 IF SC=2000 OR SC=3000 OR SC=400 >MF
0 THEN FIN=1
990 IF SC>=2150 OR  SC>=4150  THEN  >EH
FIN=0
1000 IF SC=3150 THEN FIN=4          >TU
1010 IF SC>=4500 THEN GOTO 4480     >XG
1020 TAGOFF:PEN 5:LOCATE 7,25:PRINT >MK
 sc;:TAG
1030 IF x1=0 OR x1=576 THEN cx=-cx  >AE
1040 IF b>=10 THEN b=0:GOSUB 1210   >ZF
1050 IF c>=5 THEN c=-5:GOSUB 1220   >ZU
1060 CALL &7000                     >PF
1070 MOVE 0,76:DRAWR 640,0,10       >WU
1080 GOTO 750                       >FG
1090 '**********************        >YC
1100 '*       TEST ECRAN     *      >XE
1110 '**********************        >XF
1120 IF PEEK(i)=5 OR PEEK(i)=10 OR  >KU
PEEK(i)=65 OR PEEK(i)=75 OR PEEK(i)
=130 OR PEEK(i)=135 THEN RETURN
1130 ENV 1,30,0,1,127,-1,15:SOUND 1 >UQ
29,0,240,15,1,0,10
1140 SPEED INK 1,1:INK 1,26,0:BORDE >UY
R 26,0:INK 0,0,26
1150 FOR i=1 TO 500:NEXT            >RP
1160 IF SQ(1)=132 THEN 1160 ELSE vi >HB
e=vie-1
1170 IF vie>0 THEN GOSUB 4710:GOTO  >EG
150
1180 WHILE INKEY$<>"":WEND:GOSUB 34 >FH
90
1190 CALL &BB06                     >UE
1200 CLS:GOSUB 3430:GOTO 1780       >XM
1210 IF FIN=0 THEN MOVE (INT(RND*70 >ZE
))*4+10,300:GOTO 1290
1220 IF FIN=0 THEN MOVE (INT(RND*65 >AC
))*4+346,300:GOTO 1290
1230 IF FIN=2 THEN RETURN           >UN
1240 IF FIN=1 THEN GOTO 1350        >VD
1250 IF FIN=4 THEN GOTO 1420        >VF
1260 '**********************        >YB
1270 '*      INTRUDERS      *       >YC
1280 '**********************        >YD
1290 IF RND>0.63 THEN DRAWR B,0,7:M >XJ
OVER 4,-2:DRAWR -16,0,7:PLOTR -2,0,
7:PLOTR 16,0,7:MOVER 0,-2:DRAWR 4,0
,5:DRAWR 0,-16,5:PLOTR -4,14,5:MOVE
R -16,0:DRAWR 0,2,5:DRAWR -2,0,5:DR
AWR 0,-16,5:PLOTR 4,0,3:PLOTR 16,0,
3:MOVER -4,4 ELSE GOTO 1310
1300 DRAWR 0,14,1:MOVER -4,0:DRAWR  >NL
0,-16,1:MOVER -4,2:DRAWR 0,14,1:PLO
TR 0,-4,11:PLOTR B,0,11:PLOTR -4,-6
,3:PLOTR 0,-4,11:RETURN
1310 IF RND>0.33 THEN DRAWR B,0,7:M >XG
OVER 4,-2:DRAWR -16,0,7:PLOTR -2,0,
7:PLOTR 16,0,7:MOVER 0,-2:DRAWR 4,0
,6:DRAWR 0,-16,6:PLOTR -4,14,6:MOVE
R -16,0:DRAWR 0,2,6:DRAWR -2,0,6:DR
AWR 0,-16,6:PLOTR 4,0,3:PLOTR 16,0,
3:MOVER -4,4 ELSE GOTO 1330
1320 DRAWR 0,14,1:MOVER -4,0:DRAWR  >NN
0,-16,1:MOVER -4,2:DRAWR 0,14,1:PLO
TR 0,-4,11:PLOTR B,0,11:PLOTR -4,-6
,3:PLOTR 0,-4,11:RETURN
1330 PLOTR 0,0,1:MOVER -4,0:DRAWR B, >UE
0,7:PLOTR 0,-2,7:MOVER 16,0:DRAWR 0
,2,7:DRAWR B,0,7:PLOTR 4,0,1:MOVER
-16,-2:DRAWR 0,-4,4:MOVER -4,0:DRAW
R 0,6,4:MOVER -4,-2:DRAWR 0,-4,4:PL
OTR 0,2,7:PLOTR B,0,7:PLOTR -4,-4,2
:PLOTR -12,-2,1:PLOTR 4,2,1:PLOTR 4
,-2,1
1340 PLOTR B,0,1:PLOTR 4,2,1:PLOTR  >TA
4,-2,1:RETURN
1350 TAGOFF                         >BB
1360 LOCATE 7,5:PRINT CHR$(150);"X  >WJ
  X";CHR$(151);
1370 LOCATE 6,6:PRINT CHR$(150);"X  >YF
  X";CHR$(151);
1380 LOCATE 4,7:PRINT CHR$(150);"XT >GM
HE INTRUDERX";CHR$(151);
1390 LOCATE 4,8:PRINT CHR$(152);"X  >BA
       X";CHR$(153);
1400 LOCATE 5,9:PRINT CHR$(152);"X  >ZP
  X";CHR$(153);
1410 SC=SC+25:TAG:FIN=2:RETURN      >AC
1420 TAGOFF                         >AK
1430 PEN 4:LOCATE 3,5:PRINT CHR$(15 >KP
0):LOCATE 4,6:PRINT CHR$(153)
1440 PEN 5:LOCATE 4,5:PRINT CHR$(15 >KR
1):LOCATE 3,6:PRINT CHR$(152)
1450 PEN 5:LOCATE 15,6:PRINT CHR$(1 >NT
50):LOCATE 16,7:PRINT CHR$(153)
1460 PEN 4:LOCATE 16,6:PRINT CHR$(1 >NT
51):LOCATE 15,7:PRINT CHR$(152)
1470 PEN 7:LOCATE B,7:PRINT CHR$(15 >LD
0):LOCATE 9,B:PRINT CHR$(153)
1480 PEN 1:LOCATE 9,7:PRINT CHR$(15 >KG
1):LOCATE B,B:PRINT CHR$(152)
1490 SC=SC+25:TAG:FIN=0:RETURN      >AJ
1500 '**********************        >XJ
1510 '*      TIR LASER     *        >XK
1520 '**********************        >YA
1530 ENV 2,15,-1,10:ENT 2,150,10,1: >FC
SOUND 129,50,50,15,2,2:TAGOFF:LOCAT
E 1,1:PRINT CHR$(23);CHR$(1):TAG:MO
VE x+16,60:DRAWR 0,350,2:CALL &BD19
:MOVE x+16,60:DRAWR 0,350,2:TAGOFF:
LOCATE 1,1:PRINT CHR$(23)+CHR$(0):T
AG:pb=BB
1540 FOR i=po TO (po-1520) STEP -80 >AW
1550 pb=pb+16:IF PEEK(i)=0 OR PEEK( >RB
i)=5 OR PEEK(i)=10 OR PEEK(i)=65 OR
 PEEK(i)=75 OR PEEK(i)=130 OR PEEK(
i)=135 THEN 1580
1560 sc=sc+25:ENV 1,30,0,1,127,-1,1 >UF
5:SOUND 129,0,240,15,1,0,10:PLOT -1
0,-10,2:MOVE x-22,pb:PRINT"   ";:MO
VE x-22,pb-16:PRINT"   ";:MOVE x-22
,pb-32:PRINT"   ";:MOVE x-22,pb+3:P
RINT"   ";:i=po-1520
1570 TAGOFF:LOCATE 1,1:PRINT CHR$(2 >FO
3)+CHR$(1):TAG:MOVE X+16,60:DRAWR 0
,350,2:CALL &BD19:MOVE X+16,60:DRAW
R 0,350,2:TAGOFF:LOCATE 1,1:PRINT C
HR$(23)+CHR$(0):TAG
1580 NEXT                           >LF
1590 RETURN                         >FJ
1600 '**********************        >XK
1610 '*        MENU        *        >YA
1620 '**********************        >YB
1630 GOSUB 2260                     >XC
1640 MODE 1                         >PG
1650 INK 1,26:INK 2,26:INK 3,26     >XG
1660 GOSUB 2730                     >XH
1670 WINDOW #2,7,40,7,25:PAPER#2,1: >KM
PEN#1,0
1680 WINDOW #1,3,37,3,24:PAPER#1,1: >HJ
CLS#1
1690 PEN 1:PAPER 0                  >MG
1700 LOCATE 3,3:PRINT CHR$(250):LOC >RR
ATE 37,3:PRINT CHR$(249):LOCATE 3,2
4:PRINT CHR$(248):LOCATE 37,24:PRIN
T CHR$(247)
1710 PEN #2,2                       >ZE
1720 LOCATE 18,4:PEN 3:PAPER 1:PRIN >LH
T"MENU"
1730 GOSUB 2690                     >YA
1740 LOCATE 7,20:PRINT"INTRUDER"    >BE
1750 GOSUB 2730                     >XH
1760 PEN 2:LOCATE 9,23:PRINT CHR$(1 >KH
64)" BIGHEAD SOFTWARE 1987"
1770 PEN 5:LOCATE 4,5:PRINT CHR$(15 >KY
1):LOCATE 3,6:PRINT CHR$(152)
1780 PRINT#2,"1...INSTRUCTIONS"     >BG
1790 PRINT#2                        >HE
1800 PRINT#2,"2...CHOIX CLAVIER OU  >QD
JOYSTICK"
1810 PRINT#2                        >GH
```



```
1820 PRINT #2,"3...REGLAGE DE LA DI >ND
FFICULTE"
1830 PRINT #2                       >HB
1840 PRINT #2,"4...MEILLEURS SCORES >FB
"
1850 PRINT#2                        >HB
1860 PRINT#2,"5...JEU"              >QZ
1870 INK 1,0:INK 2,11:INK 3,6       >VT
1880 a$=INKEY$                      >XB
1890 IF a$="1" THEN GOTO 1980       >VX
1900 IF a$="2" THEN GOTO 2770       >VM
1910 IF a$="3" THEN GOTO 2990       >VU
1920 IF a$="4" THEN GOTO 3200       >VE
1930 IF a$="5" THEN PRINT CHR$(22)+ >EJ
CHR$(0)+CHR$(23)+CHR$(0):VIE=3:SC=0
:GOTO 140
1940 GOTO 1880                      >NJ
1950 '********************          >YH
1960 '*       REGLES       *        >YJ
1970 '********************          >YK
1980 GOSUB 3410:GOSUB 4110          >UB
1990 DATA "      REGLES DU JEU"     >YG
2000 DATA " AU FIN FOND DE L'UNIVER >FX
S"
2010 DATA "UNE NOUVELLE BATAILLE    >FD
"
2020 DATA "VOUS ATTEND....          >CF
"
2030 DATA " FACE A CES NOUVEAUX     >EP
"
2040 DATA "ENVAHISSEURS, PLUS Q'UNE >GM
"
2050 DATA "CHOSE A FAIRE :          >CF
"
2060 DATA "       VOUS DEFENDRE!    >CR
"
2070 X=120:Y=330:PRINT CHR$(22)+CHR >LC
$(1);:PRINT CHR$(23)+CHR$(1);
2080 RESTORE 1990:FOR I=1 TO 8:READ >GC
 P$(1)
2090 TAG:PLOT -2,-2,1:MOVE X,Y:PRIN >LV
T P$(I);
2100 PLOT -2,-2,2:MOVE X+1,Y-1:PRIN >KE
T P$(I);
2110 Y=Y-20                         >UK
2120 TAGOFF                         >AH
2130 NEXT                           >KH
2140 TAGOFF                         >AK
2150 RESTORE 2220                   >LN
2160 READ A,B                       >EG
2170 IF A=-1 THEN GOTO 2210         >TX
2180 SOUND 1,A,B,7:SOUND 2,A*4,B-2, >CC
5
2190 IF INKEY(47)=0 THEN FOR k=1 TO >TN
 35:PRINT:NEXT:GOSUB 3430:GOTO 1780

2200 GOTO 2160                      >MA
2210 FOR T=1 TO 1000:NEXT T:FOR k=1 >XK
 TO 35:PRINT:NEXT:GOSUB 3430:GOTO 1
780
2220 DATA 478,50,319,50,358,13,379, >EX
13,426,13,239,60,319,60,358,13,379,
13,426,13,239,60,319,60,358,13,379,
13,358,13,426,70,-1,0
2230 '********************          >XK
2240 '* PRESENTATION CLAP  *        >YA
2250 '********************          >YB
2260 INK 0,26:BORDER 26:INK 0,26:IN >AV
K 1,26:INK 2,26:INK 3,6:INK 11,0:IN
K 13,0:INK 12,26:INK 14,11
2270 GOSUB 3750                     >XJ
2280 WINDOW#1,2,19,5,22             >RT
2290 PAPER#1,1:CLS#1                >PJ
2300 PAPER 0:PEN 1:LOCATE 2,22:PRIN >AH
T CHR$(248):LOCATE 19,22:PRINT CHR$
(247)
2310 PEN#1,0                        >YE
2320 PRINT#1,"UNIVERSAL STUDIOS"    >CH
2330 PRINT#1                        >GE
2340 PRINT#1,"PRODUCTION_______"    >FT
2350 PRINT#1,"DIRECTOR_________"    >GF
2360 PRINT#1,"CAMERA___________"    >GU
2370 PRINT#1                        >GJ
2380 PRINT#1," DATE  SCENE  TAKE";  >CG
2390 PRINT#1,"_________________"    >HW
2400 PEN 1:PAPER 0                  >LE
2410 FOR X=3 TO 17 STEP 4           >RE
2420 LOCATE X,4:PRINT CHR$(214)CHR$ >TJ
(143)CHR$(212)
2430 LOCATE X+1,3:PRINT CHR$(214)CH >VZ
R$(143)CHR$(212)
2440 NEXT                           >LB
2450 FOR X=4 TO 17 STEP 4           >RK
2460 LOCATE X,2:PRINT CHR$(213)CHR$ >TN
(143)CHR$(215)
2470 LOCATE X-1,1:PRINT CHR$(213)CH >VF
R$(143)CHR$(215)
2480 NEXT                           >LF
2490 TAG:PLOT -2,-2,1:MOVE 50,390:P >TB
RINT CHR$(231);:MOVE 50,390:PRINT C
HR$(230);:TAGOFF
2500 PLOT 30,60,1:DRAW 30,398:DRAW  >EZ
607,398:DRAW 607,330:PLOT 30,367:DR
AW 607,367
2510 PRINT CHR$(22)+CHR$(1)         >VE
2520 PEN 2                          >FK
2530 LOCATE 12,7:PRINT"INTRUDER"    >BD
2540 LOCATE 12,9:PRINT CHR$(164)+"B >KD
IGHEAD"
2550 LOCATE 13,11:PRINT"AMSTRAD"    >BY
2560 PRINT CHR$(22)+CHR$(0)         >VJ
2570 PRINT CHR$(23)+CHR$(1)         >VM
2580 FOR I=0 TO 200 STEP 2:PLOT 1,4 >GQ
00-I,12:DRAW 640,400-I:PLOT 1,1+I:D
RAW 640,1+I:NEXT:PLOT 1,200:DRAW 64
0,200,12
2590 touche1=71:touche2=63:touche3= >MX
47:n=1
2600 DIM Hi(20),nm$(20)             >QV
2610 RESTORE 2620:FOR I=1 TO 10:REA >YX
D HI(I),NM$(I):NEXT
2620 DATA 4500,"D.VINCENT",4000,"SP >KX
OCK",3000,"NEMESIS",2500,"HERKY",10
00,"COBRA",999,"MAD",950,"CRAD MAX"
,900,"SKELETOR",850,"GRYZOR",500,"M
UTANTS"
2630 WHILE INKEY$<>"":WEND          >VT
2640 A$=INKEY$                      >WG
2650 IF A$=CHR$(32) OR A$=CHR$(13)  >DG
THEN  RETURN ELSE GOTO 2640
2660 '********************          >YG
2670 '* ECRITURE MODE 0/1  *        >YH
2680 '********************          >YJ
2690 POKE &B1C8,0:POKE &B1D0,&33:RE >GF
TURN
2700  ********************          >YB
2710 '* ECRITURE MODE 1/1  *        >YC
2720  ********************          >YD
2730 POKE &B1C8,1:POKE &B1D0,&44:PO >RV
KE &B1D1,&22:POKE &B1D2,&11:RETURN
2740 '********************          >YF
2750  * CHOIX CLAVIER/JOYS.*        >YG
2760 '********************          >YH
2770 GOSUB 3410                     >XG
2780 PRINT CHR$(22)+CHR$(1)+CHR$(23 >LQ
)+CHR$(1)
2790 DATA " CLAVIER(1)...JOYSTICK(2 >FY
)"
2800 RESTORE 2790:READ P$:TAG:PLOT  >CR
-2,-2,1:MOVE 120,330:PRINT P$;:PLOT
 -2,-2,2:MOVE 121,329:PRINT P$;:TAG
OFF
2810 PEN 3:LOCATE 6,6:PRINT T1$;T2$ >VB
;" ";F$:LOCATE 22,5:PRINT CHR$(254)
+CHR$(251):LOCATE 22,6:PRINT CHR$(2
52)+CHR$(253)
2820 RESTORE 2950                   >LD
2830 ENV 2,4,0,1,7,-1,1:ENV 3,24,-1 >GD
,25,0.5
2840 G=12                           >BH
2850 FOR A=1 TO 16:READ C,D         >UM
2860 SOUND 1,C,12,15,2:SOUND 2+16,0 >LP
,12,G,3,,D
2870 IF D=1 THEN G=12 ELSE G=15     >XA
2880 IF D=1 THEN ENV 3,3,0,1,1,-12, >AG
1
2890 IF D=31 OR D=8 THEN G=15       >VQ
2900 A$=INKEY$                      >WF
2910 IF A$="1" THEN touche1=71:touc >EW
he2=63:touche3=47:CLS:GOSUB 3430:GO
TO 1780
```



```
2920 IF A$="2" THEN touche1=74:touc >EG
he2=75:touche3=76:CLS:GOSUB 3430:GO
TO 1780
2930 NEXT                           >LF
2940 GOTO 2820                      >NE
2950 DATA 638,1,638,1,319,1,319,1,6 >VX
38,31,638,1,319,1,319,1,638,1,638,1
,426,1,426,1,358,31,379,1,426,1,506
,1
2960 '**********************        >YK
2970 '* REGL. DE LA DIFFI. *        >ZA
2980 '**********************        >ZB
2990 GOSUB 3410                     >YA
3000 PRINT CHR$(22)+CHR$(1)+CHR$(23 >LA
)+CHR$(1)
3010 DATA "REGLAGE DE LA DIFFICULTE >FK
"
3020 RESTORE 3010:READ P$:TAG:PLOT  >CW
-2,-2,1:MOVE 120,330:PRINT P$;:PLOT
 -2,-2.2:MOVE 121.329:PRINT P$;:TAG
OFF
3030 PEN 2:PRINT:PRINT: PRINT:PRINT >GA
"            NIVEAU 1":PRINT"
   NIVEAU 2":PRINT"           NIVE
AU 3"
3040 DATA " APPUYER SUR 1,2 OU 3"   >BP
3050 GOSUB 4110:RESTORE 3040:READ P >XM
$:TAG:PLOT -2,-2,1:MOVE 135,200:PRI
NT P$;:PLOT -2,-2,3:MOVE 136,199:PR
INT P$;:TAGOFF
3060 RESTORE 3150                   >LT
3070 FOR U=1 TO 32:READ V,W,X       >WF
3080 ENV 5,4,0,1,8,-1,1             >PU
3090 SOUND 1,V,12,15,2:SOUND 18,0,1 >GX
2,0,3,,W:SOUND 36,X,12,14,5
3100 A$=INKEY$                      >VJ
3110 IF A$="1" THEN N=1:CLS:GOSUB 3 >PY
430:GOTO 1780
3120 IF A$="2" THEN N=2:CLS:GOSUB 3 >PB
430:GOTO 1780
3130 IF A$="3" THEN N=3:CLS:GOSUB 3 >PE
430:GOTO 1780
3140 NEXT:GOTO 3060                 >NR
3150 DATA 638,1,0,638,1,0,319,1,119 >JT
,319,1,0,638,31,106,638,1,0,319,1,1
19,319,1,0,638,1,127,638,1,0,426,1,
159,426,1,0,358,31,127,379,1,0,426,
1,159,506,1,0
3160 DATA 638,1,95,638,1,106,319,1, >RC
89,319,1,106,358,31,0,638,1,0,319,1
,0,319,1,0,638,1,0,638,1,0,426,1,0,
426,1,0,358,31,0,379,1,0,426,1,0,50
6,1,0
3170 '**********************        >YD
3180 '*       TOP  10      *        >YE
3190 '**********************        >YF
3200 GOSUB 3410:PEN 2               >PM
3210 DATA"          TOP 10"         >RJ
3220 PRINT CHR$(22)+CHR$(1)+CHR$(23 >LE
)+CHR$(1)
3230 RESTORE 3210:READ P$:TAG:PLOT  >NA
-2,-2,1:MOVE 120,330:PRINT P$;:PLOT
 -2,-2,2:MOVE 121,329:PRINT P$;
3240 GOSUB 4110:Y=290               >PR
3250 FOR I=1 TO 10                  >LE
3260 PLOT -2,-2,1:MOVE 200,Y:PRINT  >NG
HI(I);:MOVE 320,y:PRINT NM$(I);
3270 PLOT -2,-2,2:MOVE 200,Y:PRINT  >ML
HI(I);:MOVE 320,y:PRINT M$(I);
3280 Y=Y-19                         >WG
3290 NEXT:TAGOFF                    >MH
3300 RESTORE 3380                   >LV
3310 ENV 1,1,15,1,1,-3,2,1,0,1,1,0, >HD
1,12,-1,4:ENV 2,1,15,1,1,0,1,1,0,1,
12,-1,8,2,-1,20
3320 FOR V=1 TO 46:IF V=32 THEN RES >KF
TORE 3380
3330 READ P,D:D=D*15                >NC
3340 SOUND 1,P,0,6:SOUND 2,P*2,D,5, >YD
2:SOUND 4,P/3,D,5,1
3350 IF INKEY(47)=0 THEN LOCATE 1,1 >KF
8:FOR T=1 TO 16:PRINT:NEXT:GOSUB 34
30:GOTO 1780
3360 NEXT                           >LD
3370 GOTO 3400                      >MH
3380 DATA 478,4,358,3,358,1,358,4,3 >GL
19,4,284,3,284,1,284,6,358,2,319,2,
284,2,268,4,379,4,319,4,358,4
3390 DATA 239,2,239,2,284,2,213,6,2 >RC
39,2,239,2,268,2,268,6,268,2,268,2,
319,2,239,6,268,2,268,2,284,2,284,4

3400 LOCATE 1,18:FOR T=1 TO 16:PRIN >HF
T:NEXT:GOSUB 3430:GOTO 1780
3410 WINDOW 5,35,4,19:CLS           >UM
3420 RETURN                         >FC
3430 WINDOW #2,7,40,7,25:PAPER#2,1: >LE
PEN 3:LOCATE 14,1:PRINT"MENU"
3440 GOSUB 3750                     >XJ
3450 RETURN                         >FF
3460 '**********************        >YF
3470 '* CLASSE AU TOP 10?? *        >YG
3480 '**********************        >YH
3490 FOR i=1 TO 10                  >LL
3500 IF sc>hi(i) THEN 3530          >TP
3510 NEXT                           >LA
3520 INK 0,26:BORDER 26:INK 1,0:INK >PU
 2,11:INK 3,6:GOSUB 3750:GOTO 1640

3530 FOR j=10 TO 1 STEP -1          >RG
3540 hi(j+1)=hi(j):nm$(j+1)=nm$(j)  >BE
3550 NEXT                           >LE
3560 hi(i)=sc                       >MC
3570 MODE 1:PEN 2:INK 1,6:INK 2,11: >HG
INK 3,26
3580 TAGOFF                         >BJ
3590 LOCATE 16,5:PRINT CHR$(150);"I >XT
     I";CHR$(151);
3600 LOCATE 15,6:PRINT CHR$(150);"I >ZG
       I";CHR$(151);
3610 LOCATE 13,7:PRINT CHR$(150);"I >HT
THE INTRUDERI";CHR$(151);
3620 LOCATE 13,8:PRINT CHR$(152);"I >CF
           I";CHR$(153);
3630 LOCATE 14,9:PRINT CHR$(152);"I >AC
         I";CHR$(153);
3640 ENT 2,15,1,3                   >DK
3650 LOCATE 1,12                    >DH
3660 PAPER 0:PEN 3:PRINT" BRAVO, VO >RU
US ETES CLASSE DANS LE TOP 10"
3670 FOR NO=1 TO 26 STEP 0.5:BORDER >HQ
 27-NO:INK 0,NO:INK 2,27-NO:INK 3,2
7-NO:FOR T=1 TO 40:NEXT T:SOUND 130
,0,5,15,0,0,NO:NEXT NO:INK 0,0:PEN
3:INK 2,11:INK 3,26:INK 1,6:BORDER
0
3680 PEN 1:PRINT:PRINT"    ENTREZ V >TZ
OTRE NOM:";
3690 WHILE INKEY$<>"":WEND          >VA
3700 PEN 3:LINE INPUT G$            >RX
3710 NM$(I)=LEFT$(G$,10):INK 0,26:B >TW
ORDER 26:INK 1,0:INK 2,11:INK 3,6:G
OSUB 3750:GOTO 1640
3720 '**********************        >YE
3730 '*    REDEF. CARAC.   *        >YF
3740 '**********************        >YG
3750 SYMBOL AFTER 32                >PA
3760 SYMBOL 250,7,&1F,&3F,&7F,&7F,2 >LV
55,255,255
3770 SYMBOL 249,&E0,&F8,&FC,&FE,&FE >PU
,255,255,255
3780 SYMBOL 248,255,255,&CF,&47,&63 >MW
,&33,&1F,&7
3790 SYMBOL 247,255,255,255,254,254 >NE
,&FC,&F8,&E0
3800 SYMBOL 254,0,0,15,7,3,3,3,3    >YC
3810 SYMBOL 251,0,0,128,192,192,192 >JR
,192,192
3820 SYMBOL 252,3,3,3,3,15,31,31,31 >AH

3830 SYMBOL 253,192,192,192,128,254 >NK
,254,252,252
3840 SYMBOL 65,254,194,194,254,226, >HX
226,226
3850 SYMBOL 66,252,194,194,252,226, >HU
226,252
3860 SYMBOL 67,254,192,192,192,224, >HV
224,254
3870 SYMBOL 68,252,194,194,194,226, >HD
226,252
3880 SYMBOL 69,254,192,192,254,224, >HY
```



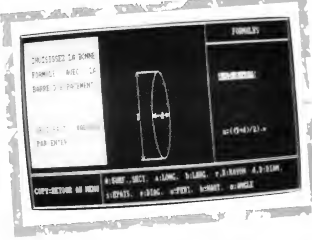
```
224,254
3890 SYMBOL 70,254,192,192,254,224, >HM
224,224
3900 SYMBOL 71,254,192,192,198,226, >HT
226,252
3910 SYMBOL 72,194,194,194,254,226, >HW
226,226
3920 SYMBOL 73,24,24,24,24,28,28,28 >BG
3930 SYMBOL 74,6,6,6,6,230,230,124 >AN
3940 SYMBOL 75,70,196,200,240,232,2 >GN
28,226
3950 SYMBOL 76,192,192,192,192,224, >HX
224,255
3960 SYMBOL 77,198,234,210,194,226, >HX
226,226
3970 SYMBOL 78,194,226,210,202,230, >HE
226,226
3980 SYMBOL 79,124,194,194,194,226, >HD
226,124
3990 SYMBOL 80,254,194,194,254,224, >HU
224,224
4000 SYMBOL 81,124,194,194,194,234, >HC
228,122
4010 SYMBOL 82,254,194,194,254,232, >HJ
228,226
4020 SYMBOL 83,124,194,192,124,2,22 >FM
6,124
4030 SYMBOL 84,254,48,48,48,56,56,5 >CM
6
4040 SYMBOL 85,194,194,194,194,226, >HZ
226,254
4050 SYMBOL 86,194,194,194,194,226, >GC
100,56
4060 SYMBOL 87,194,194,194,194,242, >HH
234,198
4070 SYMBOL 88,194,196,104,48,104,2 >GC
28,226
4080 SYMBOL 89,194,194,100,48,56,56 >EK
,56
4090 SYMBOL 90,254,2,4,24,48,224,25 >CM
4
4100 RETURN >EJ
4110 SYMBOL 65,124,254,198,198,254, >MK
254,198,198
4120 SYMBOL 66,248,196,198,254,254, >MU
198,196,248
4130 SYMBOL 67,126,254,192,192,192, >MN
192,254,126
4140 SYMBOL 68,248,252,198,198,198, >MY
198,252,248
4150 SYMBOL 69,254,254,192,240,192, >MQ
192,254,254
4160 SYMBOL 70,254,254,192,240,192, >MK
192,192,192
4170 SYMBOL 71,254,254,192,192,206, >MU
198,254,254
4180 SYMBOL 72,198,198,198,254,254, >MK
198,198,198
4190 SYMBOL 73,126,126,24,24,24,24, >HU
126,126
4200 SYMBOL 74,30,30,12,12,236,236, >HY
124,124
4210 SYMBOL 75,98,102,108,120,120,1 >LB
20,108,102
4220 SYMBOL 76,240,240,96,96,102,10 >HD
2,126,126
4230 SYMBOL 77,254,254,214,214,198, >MM
198,198,198
4240 SYMBOL 78,102,102,118,110,102, >LN
102,102,102
4250 SYMBOL 79,126,126,102,102,102, >MB
102,126,126
4260 SYMBOL 80,126,126,102,126,126, >JF
96,96,96
4270 SYMBOL 81,254,254,198,198,222, >MU
220,246,246
4280 SYMBOL 82,252,102,102,124,120, >LB
108,102,231
4290 SYMBOL 83,126,126,96,124,62,6, >HG
126,124
4300 SYMBOL 84,254,254,56,56,56,56, >GA
56,124
4310 SYMBOL 85,102,102,102,102,102, >LQ
102,126,126
4320 SYMBOL 86,102,102,102,102,102, >JA
102,60,24
4330 SYMBOL 87,238,238,238,254,254, >ML
238,238,198
4340 SYMBOL 88,102,126,24,24,24,24, >HJ
126,102
4350 SYMBOL 89,102,102,36,24,24,24, >FF
60,60
4360 SYMBOL 90,126,126,6,12,24,48,1 >GF
26,126
4370 RETURN >FH
4380 '********************* >YH
4390 '*      ROUTINE LM      * >YJ
4400 '*      CALL &7000      * >YA
4410 '********************* >YB
4420 DATA 195,9,112,1,80,5,237,184, >TN
201,33,63,246,17,63,254,205,3,112,3
3,63,238,17,63,246,205,3,112,33,63,
230,17,63,238,205,3,112,33,63,222,1
7,63,230,205,3,112,33,63,214,17,63,
222,205,3,112
4430 DATA 33,63,206,17,63,214,205,3 >ZB
,112,33,63,198,17,63,206,205,3,112,
33,239,253,17,63,198,205,3,112,201,
0,0,0
4440 RESTORE 4420 >LX
4450 FOR i=&7000 TO &7054:READ a:PO >GH
KE i,a
4460 NEXT >LF
4470 RETURN >FJ
4480 TAGOFF >BJ
4490 FOR i=1 TO 21:LOCATE 1,25:PRIN >ML
T"↓":NEXT
4500 FOR i=21 TO 1 STEP -1:LOCATE 1 >UW
,1:PRINT"↑":NEXT
4510 INK 0,0:BORDER 0 >PU
4520 PEN 1 >GA
4530 A$(1)="BRAVO,VOUS AVEZ" >XT
4540 A$(2)="DETRUIT TOUS LES" >YV
4550 A$(3)="INTRUDERS'''" >TZ
4560 M=1 >WF
4570 Y=6 >YD
4580 FOR t=1 TO 10 >LZ
4590 FOR i=1 TO LEN(A$(M)) >TN
4600 PEN INT(RND*8)+1 >FM
4610 BORDER INT(RND*15) >RE
4620 LOCATE 2+I,Y >LL
4630 PRINT MID$(A$(M),I,1) >UV
4640 SOUND 1,50,4,7:SOUND 3,10,3,6: >QG
SOUND 2,5,2,5
4650 NEXT >LG
4660 M=M+1:Y=Y+1 >LN
4670 IF M=4 THEN M=1:Y=6 >RG
4680 NEXT t >XE
4690 BORDER 0 >JK
4700 GOTO 3490 >NE
4710 MODE 0:INK 1,24:INK 2,6:INK 0, >LM
0:BORDER 0
4720 PLOT 50,100,1:DRAW 50,370:DRAW >TG
 590,370:DRAW 590,100:DRAW 50,100:P
LOT 592,372,2:DRAW 592,98:DRAW 46,9
8:DRAW 46,372,4:DRAW 592,372
4730 PEN 8 >HA
4740 LOCATE 4,4:PRINT"IL VOUS RESTE >GD
:"
4750 PEN 7 >HB
4760 FOR X=8 TO 5+(VIE*2.5) STEP 2 >ZR
4770 LOCATE X,10:PRINT CHR$(240) >AL
4780 NEXT >MA
4790 IF VIE=2 THEN LOCATE 12,10:PRI >BT
NT CHR$(238)CHR$(239):LOCATE 12,9:P
RINT CHR$(236)CHR$(237)
4800 IF VIE=1 THEN LOCATE 8,10:PRIN >ED
T CHR$(240)" "CHR$(238)CHR$(239);"
";CHR$(238)CHR$(239):LOCATE 10,9:PR
INT CHR$(236)CHR$(237)" "CHR$(236)C
HR$(237)
4810 WHILE INKEY$<>"":WEND >VV
4820 CALL &BB06 >UH
4830 RETURN >FJ
4840 ' ****  ***  *  * >YJ
4850 ' *       *  ** * >YK
4860 ' **      *  **** >ZA
4870 ' *       *  * ** >ZB
4880 ' *       *  *  * >ZC
4890 ' *     ***  *  * >ZD
```



SURFACE

Emmanuel GUILLARD

Calculer la surface d'un carré ou d'un rectangle... Facile ! Mais celle d'un trapèze, d'un losange ou, mieux, d'une ellipse, cela vous dirait ? Pas vraiment, n'est-ce pas ? Surface vous permet de calculer tout cela en deux temps, trois mouvements avec formules à l'appui.
Si vous avez du mal en math et que votre prochaine interro approche, saisissez vite ce programme qui vous fera réviser vos points faibles. Initialement conçu avec son complément : Volume (qui sera publié dans le prochain hors série), Surface est parfaitement utilisable seul. Alors, bonne révision...



```
10 ON ERROR GOTO 4890                      >PY
20 '                                       >LB
30 ' SURFACES                              >LC
40 '                                       >LD
50 ' MENU PRINCIPAL                        >LE
60 '                                       >LF
70 MODE 2:SU$=CHR$(24):SURF=1:GOSUB >JY
 4850
80 LOCATE 26,6:PRINT SU$;"CARRE";SU >PZ
$;SPC(10);SU1$;"LOSANGE";SU1$
90 LOCATE 26,8:PRINT SU2$;"RECTANGL >KT
E";SU2$;SPC(6);SU3$;"PARALLELOGRAMM
E";SU3$
100 LOCATE 26,10:PRINT SU4$;"TRIANG >YF
LE";SU4$;SPC(7);SU5$;"TRAPEZE";SU5$

110 LOCATE 26,12:PRINT SU6$;"CERCLE >XE
";SU6$;SPC(9);SU7$;"COURONNE";SU7$
120 LOCATE 26,14:PRINT SU8$;"SECTEU >PL
R";SU8$;SPC(8);SU9$;"SEGMENT CIRCUL
AIRE";SU9$
130 LOCATE 26,16:PRINT SU10$;"ELLIP >NQ
SE";SU10$
140 '                                      >RF
150 ' CHOIX                                >RG
160 '                                      >RH
170 IF INKEY(8)=0 THEN SURF=SURF-1: >LG
GOTO 240
180 IF INKEY(0)=0 THEN SURF=SURF-2: >LA
GOTO 240
190 IF INKEY(1)=0 THEN SURF=SURF+1: >LA
GOTO 250
200 IF INKEY(2)=0 THEN SURF=SURF+2: >LU
GOTO 250
210 IF INKEY(9)=0 THEN RUN"SURVOL"  >CC
 ' k7
220 IF INKEY(18)=0 THEN ON SURF GOS >FH

UB 390,790,1230,1610,2090,2390,2740
,3090,3250,3590,4070:GOTO 80
230 GOTO 170                               >YK
240 IF SURF<1 THEN SURF=11                 >VM
250 IF SURF>11 THEN SURF=1                 >VN
260 ON SURF GOSUB 270,280,290,300,3 >PB
10,320,330,340,350,360,370:GOTO 80
270 SU$=CHR$(24):SU1$="":SU2$="":SU >CF
10$="":SU9$="":RETURN
280 SU1$=CHR$(24):SU$="":SU2$="":SU >CA
3$="":SU10$="":RETURN
290 SU2$=CHR$(24):SU$="":SU1$="":SU >BA
3$="":SU4$="":RETURN
300 SU3$=CHR$(24):SU1$="":SU2$="":S >CB
U4$="":SU5$="":RETURN
310 SU4$=CHR$(24):SU2$="":SU3$="":S >CH
U5$="":SU6$="":RETURN
320 SU5$=CHR$(24):SU3$="":SU4$="":S >CP
U6$="":SU7$="":RETURN
330 SU6$=CHR$(24):SU4$="":SU5$="":S >CW
U7$="":SU8$="":RETURN
340 SU7$=CHR$(24):SU5$="":SU6$="":S >CC
U8$="":SU9$="":RETURN
350 SU8$=CHR$(24):SU6$="":SU7$="":S >DE
U9$="":SU10$="":RETURN
360 SU9$=CHR$(24):SU7$="":SU8$="":S >EH
U10$="":SU11$="":RETURN
370 SU10$=CHR$(24):SU$="":SU8$="":S >BH
U9$="":SU$="":RETURN
380 ' carre                                >TB
390 MODE 2:GOSUB 4670:GOSUB 4860           >ZD
400 PLOT 320,200,13:DRAWR -100,0:DR >PL
AWR 0,100:DRAWR 100,0:DRAWR 0,-100
410 PLOT 220,200:DRAWR -17,0:DRAWR  >UQ
0,100:DRAWR 17,0
420 PLOT 203,200:DRAWR -5,10:PLOTR  >MQ
11,0:DRAWR -5,-10:PLOT 203,300:DRAW
R -5,-10:PLOTR 11,0:DRAWR -5,10
430 PLOT 220,200:DRAWR 0,-17:DRAWR  >UT
100,0:DRAWR 0,17
```

```
440 PLOT 220,183:DRAWR 10,5:PLOTR 0 >JD
,-11:DRAWR -10,5:PLOT 320,183:DRAWR
 -10,5:PLOTR 0,-11:DRAWR 10,5
450 PLOT 220,200:DRAWR 100,100      >XR
460 LOCATE 26,10:PRINT "a":LOCATE 3 >WG
4,14:PRINT "a":LOCATE 34,10:PRINT "
e"
470 fo1$=CHR$(24):fo2$="":fo3$="":f >HT
o4$=""
480 fo=1                            >YN
490 LOCATE #3,59,6:PRINT #3,fo1$;"A >XV
=a";CHR$(255);fo1$
500 LOCATE #3,59,10:PRINT #3,fo2$;" >NR
a=  A";fo2$
510 LOCATE #3,59,14:PRINT #3,fo3$;" >PK
e=a  2";fo3$
520 LOCATE #3,59,18:PRINT #3,fo4$;" >NA
u=4a";fo4$
530 ' radicaux                      >RJ
540 PLOT 480,255,1:DRAWR 8,-14:DRAW >KT
R 8,14:DRAWR 16,0:PLOT 488,192:DRAW
R 8,-14:DRAWR 8,14:DRAWR 16,0
550 IF INKEY(18)=0 THEN 650         >UN
560 IF INKEY(47)=0 THEN 590         >UV
570 IF INKEY(9)=0 THEN CLS:RETURN   >CG
580 GOTO 550                        >ZK
590 fo=fo+1:IF fo>4 THEN fo=1       >XG
600 ON fo GOSUB 610,620,630,640:GOT >FL
O 490
610 fo1$=CHR$(24):fo2$="":fo3$="":f >RW
o4$="":RETURN
620 fo2$=CHR$(24):fo1$="":fo3$="":f >RX
o4$="":RETURN
630 fo3$=CHR$(24):fo1$="":fo2$="":f >RY
o4$="":RETURN
640 fo4$=CHR$(24):fo1$="":fo2$="":f >RZ
o3$="":RETURN
650 CALL &BB03:CLS#1:ON fo GOSUB 66 >NY
0,690,750,720:CLS#1:GOSUB 4770:GOSU
B 4860:GOTO 470
660 tab1=2:tab2=2:GOSUB 4330        >WV
670 aire=ROUND(co1^2,4):LOCATE #1,2 >TC
,6:PRINT#1,"L'aire est de :":PRINT
#1,aire;" cm";CHR$(255);" ."
680 CALL &BB06:RETURN               >QB
690 tab1=2:tab2=2:GOSUB 4640        >WC
700 co=ROUND(SQR(aire),4):LOCATE #1 >YE
,2,6:PRINT#1,"Le cote est de :":PRI
NT #1,co;" cm ."
710 CALL &BB06:RETURN               >QV
720 tab1=2:tab2=2:GOSUB 4330        >WR
730 per=ROUND(co1*4):LOCATE #1,2,6: >JG
PRINT#1,"Le perimetre est":PRINT #1
,"  de :";per;" cm ."
740 CALL &BB06:RETURN               >QY
750 tab1=2:tab2=2:GOSUB 4330        >WV
760 dia=ROUND(co1*SQR(2),4):LOCATE  >UU
#1,2,6:PRINT#1,"La diagonale est":P
RINT #1,"  de :";dia;" cm ."
770 CALL &BB06:RETURN               >QB
780 ' losange                       >TF
790 MODE 2:GOSUB 4670:GOSUB 4860    >ZH
800 PLOT 320,200,13:DRAWR -100,0:DR >RK
AWR 30,87:DRAWR 100,0:DRAWR -30,-87

810 PLOT 220,200:DRAWR 0,-17:DRAWR  >UV
100,0:DRAWR 0,17
820 PLOT 220,200:DRAWR -13,4:DRAWR  >VL
30,87:DRAWR 13,-4
830 PLOT 220,183:DRAWR 10,5:PLOTR 0 >JG
,-11:DRAWR -10,5:PLOT 320,183:DRAWR
 -10,5:PLOTR 0,-11:DRAWR 10,5
840 PLOT 207,204:DRAWR -2,8:MOVER 2 >DH
,-8:DRAWR 8,4:PLOT 237,291:DRAWR 2,
-8:MOVER -2,8:DRAWR -8,-4
850 PLOT 280,200:DRAWR 0,87:MOVER 0 >FH
,-79:DRAWR -8,0:DRAWR 0,-8
860 LOCATE 28,10:PRINT "a":LOCATE 3 >WU
4,14:PRINT "a":LOCATE 36,10:PRINT "
h"
870 ORIGIN 220,200:DEG:PLOT 20,0:FO >HP
R a%=0 TO 70 STEP 10:DRAW 20*COS(a%
),20*SIN(a%):NEXT:ORIGIN 0,0
880 LOCATE 30,12:PRINT CHR$(176)    >ZQ
890 fo1$=CHR$(24):fo2$="":fo3$="":f >NP
o4$="":fo=1
900 LOCATE #3,59,6:PRINT #3,fo1$;"A >NR
=a.h";fo1$
910 LOCATE #3,59,10:PRINT #3,fo2$;" >VC
A=a";CHR$(255);"sin";CHR$(176);fo2$

920 LOCATE #3,59,14:PRINT #3,fo3$;" >PQ
a=A/h";fo3$
930 LOCATE #3,59,18:PRINT #3,fo4$;" >NF
u=4a";fo4$
940 IF INKEY(18)=0 THEN 1040        >VJ
950 IF INKEY(47)=0 THEN 980         >UB
960 IF INKEY(9)=0 THEN CLS:RETURN   >CK
970 GOTO 940                        >AF
980 fo=fo+1:IF fo>4 THEN fo=1       >XK
990 ON fo GOSUB 1000,1010,1020,1030 >JG
:GOTO 900
1000 fo1$=CHR$(24):fo2$="":fo3$="": >TK
fo4$="":RETURN
1010 fo2$=CHR$(24):fo1$="":fo3$="": >TL
fo4$="":RETURN
1020 fo3$=CHR$(24):fo1$="":fo2$="": >TM
fo4$="":RETURN
1030 fo4$=CHR$(24):fo1$="":fo2$="": >TN
fo3$="":RETURN
1040 CALL &BB03:CLS#1:ON fo GOSUB 1 >VL
050,1100,1170,1140:CLS#1:GOSUB 4770
:GOSUB 4860:GOTO 890
1050 tab1=2:tab2=2:GOSUB 4330       >XL
1060 tab1=2:tab2=8:GOSUB 4460       >XY
1070 IF haut>co1 THEN LOCATE #1,1,1 >HM
:PRINT#1,CHR$(7):GOSUB 4460
1080 aire=ROUND(co*haut,4):LOCATE # >ZR
1,2,10:PRINT#1,"L'aire est de :":PR
INT #1,aire;" cm";CHR$(255);" ."
1090 CALL &BB06:RETURN              >RM
1100 tab1=2:tab2=2:GOSUB 4330       >XG
1110 tab1=2:tab2=8:GOSUB 4420       >XP
1120 aire=ROUND(co1^2*SIN(angl),4): >NR
LOCATE #1,2,10:PRINT#1,"L'aire est
de :":PRINT #1,aire;" cm";CHR$(255)
;" ."
1130 CALL &BB06:RETURN              >RG
1140 tab1=2:tab2=2:GOSUB 4330       >XL
1150 per=ROUND(co1*4):LOCATE #1,2,6 >KU
:PRINT#1,"Le perimetre est":PRINT #
1,"  de :";per;" cm ."
1160 CALL &BB06:RETURN              >RK
1170 tab1=2:tab2=2:GOSUB 4640       >XU
1180 tab1=2:tab2=8:GOSUB 4460       >XB
1190 IF haut>SQR(aire) THEN LOCATE  >QJ
#1,1,1:PRINT#1,CHR$(7):GOTO 1180
1200 co=ROUND(aire/haut,4):LOCATE # >BM
1,2,10:PRINT#1,"Le cote est de :":P
RINT #1,co;" cm ."
1210 CALL &BB06:RETURN              >RF
1220 'rectangle                     >XH
1230 MODE 2:GOSUB 4670:GOSUB 4860   >AX
1240 PLOT 420,200,13:DRAWR -200,0:D >QF
RAWR 0,100:DRAWR 200,0:DRAWR 0,-100

1250 PLOT 220,200:DRAWR -17,0:DRAWR >VN
 0,100:DRAWR 17,0
1260 PLOT 203,200:DRAWR -5,10:PLOTR >PE
 11,0:DRAWR -5,-10:PLOT 203,300:DRA
WR -5,-10:PLOTR 11,0:DRAWR -5,10
1270 PLOT 220,200:DRAWR 0,-17:DRAWR >VR
 200,0:DRAWR 0,17
1280 PLOT 220,183:DRAWR 10,5:PLOTR  >LR
0,-11:DRAWR -10,5:PLOT 420,183:DRAW
R -10,5:PLOTR 0,-11:DRAWR 10,5
1290 PLOT 220,200:DRAWR 200,100     >XD
1300 LOCATE 26,10:PRINT "b":LOCATE  >WX
40,14:PRINT "a":LOCATE 40,9:PRINT "
e"
1310 fo1$=CHR$(24):fo2$="":fo3$=""  >AY
1320 fo=1                           >OH
1330 LOCATE #3,59,8:PRINT #3,fo1$;" >PA
A=a.b";fo1$
1340 LOCATE #3,59,13:PRINT #3,fo2$; >WA
"e=  a";CHR$(255);"+b";CHR$(255);fo
2$
1350 LOCATE #3,59,18:PRINT #3,fo3$; >TB
"u=2a+2b";fo3$
1360 ' radicaux                     >YC
1370 PLOT 480,208:DRAWR 8,-14:DRAWR >UA
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 8,14:DRAWR 50,0
1380 IF INKEY(18)=0 THEN 1470          >WL
1390 IF INKEY(47)=0 THEN 1420          >WJ
1400 IF INKEY(9)=0 THEN CLS:RETURN     >CJ
1410 GOTO 1380                         >MF
1420 fo=fo+1:IF fo>3 THEN fo=1         >XD
1430 ON fo GOSUB 1440,1450,1460:GOT >GQ
O 1330
1440 fo1$=CHR$(24):fo2$="":fo3$="": >JG
RETURN
1450 fo2$=CHR$(24):fo1$="":fo3$="": >JH
RETURN
1460 fo3$=CHR$(24):fo1$="":fo2$="": >JJ
RETURN
1470 CALL &BB03:CLS#1:ON fo GOSUB 1 >PM
480,1520,1560:CLS#1:GOSUB 4770:GOSU
B 4860:GOTO 1310
1480 tab1=2:tab2=2:GOSUB 4330          >XU
1490 tab1=2:tab2=6:GOSUB 4360          >XC
1500 aire=ROUND(co1*co2,4):LOCATE # >XK
1,2,8:PRINT#1,"L'aire est de :":PRI
NT #1,aire;" cm";CHR$(255);" ."
1510 CALL &BB06:RETURN                 >RJ
1520 tab1=2:tab2=2:GOSUB 4330          >XN
1530 tab1=2:tab2=6:GOSUB 4360          >XX
1540 dia=ROUND(SQR(co1^2+co2^2),4): >JP
LOCATE #1,2,10:PRINT#1,"La diagonal
e est":PRINT #1,"  de :";dia;" cm .
"
1550 CALL &BB06:RETURN                 >RN
1560 tab1=2:tab2=2:GOSUB 4330          >XT
1570 tab1=2:tab2=6:GOSUB 4360          >XB
1580 per=ROUND(co1*2+co2*2,4):LOCAT >ZC
E #1,2,10:PRINT#1,"Le perimetre est
":PRINT #1,"  de :";per;" cm ."
1590 CALL &BB06:RETURN                 >RT
1600 ' PARALLELOGRAMME                 >XK
1610 MODE 2:GOSUB 4670:GOSUB 4860      >AZ
1620 PLOT 370,200,13:DRAWR -150,0:D >TR
RAWR 30,87:DRAWR 150,0:DRAWR -30,-8
7
1630 PLOT 220,200:DRAWR 0,-17:DRAWR >VW
 150,0:DRAWR 0,17
1640 PLOT 220,200:DRAWR -13,4:DRAWR >WH
 30,87:DRAWR 13,-4
1650 PLOT 220,183:DRAWR 10,5:PLOTR  >LX
0,-11:DRAWR -10,5:PLOT 370,183:DRAW
R -10,5:PLOTR 0,-11:DRAWR 10,5
1660 PLOT 207,204:DRAWR -2,8:MOVER  >EX
2,-8:DRAWR 8,4:PLOT 237,291:DRAWR 2
,-8:MOVER -2,8:DRAWR -8,-4
1670 PLOT 320,200:DRAWR 0,87:MOVER  >GH
0,-79:DRAWR -8,0:DRAWR 0,-8
1680 LOCATE 28,10:PRINT "b":LOCATE  >YM
38,14:PRINT "a":LOCATE 39,12:PRINT
"h"
1690 ORIGIN 220,200:DEG:PLOT 20,0:F >JF
OR a%=0 TO 70 STEP 10:DRAW 20*COS(a
%),20*SIN(a%):NEXT:ORIGIN 0,0
1700 LOCATE 30,12:PRINT CHR$(176):P >VM
LOT 220,200:DRAWR 180,87:MOVER -150
,0:DRAWR 120,-87:LOCATE 34,9:PRINT
"e2":LOCATE 45,9:PRINT "e1"
1710 fo1$=CHR$(24):fo2$="":fo3$="": >PZ
fo4$="":fo=1
1720 LOCATE #3,59,6:PRINT #3,fo1$;" >PH
A=a.h";fo1$
1730 LOCATE #3,59,10:PRINT #3,fo2$; >JL
"A=a.b.sin";CHR$(176);fo2$
1740 LOCATE #3,59,14:PRINT #3,fo3$; >FE
"e1=  (a+h.cot";CHR$(176);")";CHR$(
255);"+h";CHR$(255);fo3$
1750 LOCATE #3,59,18:PRINT #3,fo4$; >FQ
"e2=  (a-h.cot";CHR$(176);")";CHR$(
255);"+h";CHR$(255);fo4$
1760 ' radicaux                        >YG
1770 PLOT 488,128,1:DRAWR 8,-14:DRA >PK
WR 8,14:DRAWR 120,0:PLOT 488,192:DR
AWR 8,-14:DRAWR 8,14:DRAWR 120,0
1780 IF INKEY(18)=0 THEN 1880          >WW
1790 IF INKEY(47)=0 THEN 1820          >WT
1800 IF INKEY(9)=0 THEN CLS:RETURN     >CN
1810 GOTO 1780                         >ND
1820 fo=fo+1:IF fo>4 THEN fo=1         >XJ
1830 ON fo GOSUB 1840,1850,1860,187 >MA
0:GOTO 1720
1840 fo1$=CHR$(24):fo2$="":fo3$="": >TY
fo4$="":RETURN
1850 fo2$=CHR$(24):fo1$="":fo3$="": >TZ
fo4$="":RETURN
1860 fo3$=CHR$(24):fo1$="":fo2$="": >TA
fo4$="":RETURN
1870 fo4$=CHR$(24):fo1$="":fo2$="": >TB
fo3$="":RETURN
1880 CALL &BB03:CLS#1:ON fo GOSUB 1 >XH
890,1930,1980,2030:CLS#1:GOSUB 4770
:GOSUB 4860:GOTO 1710
1890 tab1=2:tab2=2:GOSUB 4330          >XZ
1900 tab1=2:tab2=8:GOSUB 4460          >XB
1910 aire=ROUND(co1*haut,4):LOCATE  >AY
#1,2,10:PRINT#1,"L'aire est de :":P
RINT #1,aire;" cm";CHR$(255);" ."
1920 CALL &BB06:RETURN                 >RP
1930 tab1=2:tab2=2:GOSUB 4330          >XU
1940 tab1=2:tab2=6:GOSUB 4360          >XC
1950 tab1=2:tab2=10:GOSUB 4420         >YV
1960 aire=ROUND(co1*co2*SIN(angl),4 >RY
):LOCATE #1,2,14:PRINT#1,"L aire es
t de :":PRINT #1,aire;" cm";CHR$(25
5);" ."
1970 CALL &BB06:RETURN                 >RV
1980 tab1=2:tab2=2:GOSUB 4330          >XZ
1990 tab1=2:tab2=6:GOSUB 4460          >XJ
2000 tab1=2:tab2=10:GOSUB 4420         >YF
2010 dia=ROUND(SQR((co1+haut+1/(TAN >GH
(angl)))^2+haut^2),4):LOCATE #1,2,1
2:PRINT#1,"La diagonale e1 est":PRI
NT #1,"  de :";dia;" cm ."
2020 CALL &BB06:RETURN                 >RF
2030 tab1=2:tab2=2:GOSUB 4330          >XK
2040 tab1=2:tab2=6:GOSUB 4460          >XV
2050 tab1=2:tab2=10:GOSUB 4420         >YL
2060 dia=ROUND(SQR((co1-haut+1/(TAN >GR
(angl)))^2+haut^2),4):LOCATE #1,2,1
2:PRINT#1,"La diagonale e2 est":PRI
NT #1,"  de :";dia;" cm ."
2070 CALL &BB06:RETURN                 >RL
2080 ' triangle                        >YC
2090 MODE 2:GOSUB 4670:GOSUB 4860      >AC
2100 PLOT 320,200,13:DRAWR -100,0:D >BT
RAWR 60,87:DRAWR 40,-87
2110 PLOT 220,200:DRAWR 0,-17:DRAWR >VJ
 100,0:DRAWR 0,17
2120 PLOT 220,183:DRAWR 10,5:PLOTR  >LJ
0,-11:DRAWR -10,5:PLOT 320,183:DRAW
R -10,5:PLOTR 0,-11:DRAWR 10,5
2130 PLOT 320,200:DRAWR 14,8:DRAWR  >XQ
-40,87:DRAWR -14,-8
2140 PLOT 334,208:DRAWR 0,8:MOVER 0 >CK
,-8:DRAWR -8,4:PLOT 294,295:DRAWR 0
,-8:MOVER 0,8:DRAWR 8,-4
2150 DEG:PLOT 312,218:FOR f=180 TO  >Z6
250 STEP 10:DRAWR 4*COS(f),4*SIN(f)
:NEXT
2160 PLOT 220,200:DRAWR 0,87:DRAWR  >PT
60,0:MOVER -60,0:DRAWR -5,-5:PLOTR
10,0:DRAWR -5,5:MOVER 0,-82:DRAWR 5
,5:PLOTR -10,0:DRAWR 5,-5
2170 LOCATE 28,10:PRINT"h":LOCATE 3 >RG
4,14:PRINT"a":LOCATE 40,10:PRINT"b"
:LOCATE 37,12:PRINT CHR$(177);
2180 fo1$=CHR$(24):fo2$="":fo=1        >YZ
2190 LOCATE #3,59,6:PRINT #3,fo1$;" >UE
A=(a.h)/2";fo1$
2200 LOCATE #3,59,14:PRINT #3,fo2$; >FQ
"h=b.sin";CHR$(177);fo2$
2210 IF INKEY(18)=0 THEN 2290          >WE
2220 IF INKEY(47)=0 THEN 2250          >WD
2230 IF INKEY(9)=0 THEN CLS:RETURN     >CL
2240 GOTO 2210                         >MA
2250 fo=fo+1:IF fo>2 THEN fo=1         >XE
2260 ON fo GOSUB 2270,2280:GOTO 219 >CM
0
2270 fo1$=CHR$(24):fo2$="":fo3$="": >TW
fo4$="":RETURN
2280 fo2$=CHR$(24):fo1$="":fo3$="": >TX
fo4$="":RETURN
2290 CALL &BB03:CLS#1:ON fo GOSUB 2 >GN
300,2340:CLS#1:GOSUB 4770:GOSUB 486
0:GOTO 2180
2300 tab1=2:tab2=2:GOSUB 4330          >XK
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2310 tab1=2:tab2=8:GOSUB 4460                    >XX
2320 aire=ROUND((col*haut)/2,4):LOCATE #1,2,10:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >GK
2330 CALL &BB06:RETURN                           >RK
2340 tab1=2:tab2=2:GOSUB 4360                    >XT
2350 tab1=2:tab2=8:GOSUB 4440                    >XZ
2360 haut=ROUND(co2*SIN(ang1),4):LOCATE #1,2,10:PRINT#1,"La hauteur est de :":PRINT #1,haut;" cm." >WK
2370 CALL &BB06:RETURN                           >RP
2380 'TRAPEZE                                    >YF
2390 MODE 2:GOSUB 4670:GOSUB 4860:PLOT 400,200,13:DRAWR -150,0:DRAWR 20,80:DRAWR 80,0:DRAWR 50,-80 >HJ
2400 PLOT 400,200:DRAWR 0,-15:DRAWR -10,4:MOVER 0,-8:DRAWR 10,4:DRAWR -150,0:DRAWR 10,4:MOVER 0,-8:DRAWR -10,4:DRAWR 0,15 >XD
2410 PLOTR 10,40:DRAWR 115,0:DRAWR -10,4:MOVER 0,-8:DRAWR 10,4:MOVER -115,0:DRAWR 10,4:MOVER 0,-8:DRAWR -10,4 >BF
2420 PLOT 350,280:DRAWR 0,15:DRAWR -10,4:MOVER 0,-8:DRAWR 10,4:DRAWR -80,0:DRAWR 10,4:MOVER 0,-8:DRAWR -10,4:DRAWR 0,-15 >NJ
2430 PLOT 350,280:DRAWR 70,0:DRAWR-4,-10:MOVER 8,0:DRAWR -4,10:DRAWR 0,-80:DRAWR -4,10:MOVER 8,0:DRAWR -4,-10:DRAW 400,200 >ZD
2440 LOCATE 40,7:PRINT "b":LOCATE 40,10:PRINT "m":LOCATE 40,14:PRINT "a":LOCATE 53,10:PRINT "h" >FJ
2450 fo1$=CHR$(24):fo2$="":fo3$=""       >AE
2460 fo=1                                        >ED
2470 LOCATE #3,59,8:PRINT #3,fo1$;"A=((a+b)/2).h";fo1$ >YT
2480 LOCATE #3,59,13:PRINT #3,fo2$;"A=m.h";fo2$  >QU
2490 LOCATE #3,59,18:PRINT #3,fo3$;"m=(a+b)/2";fo3$ >VB
2500 IF INKEY(18)=0 THEN 2590                    >WK
2510 IF INKEY(47)=0 THEN 2540                    >WH
2520 IF INKEY(9)=0 THEN CLS:RETURN               >CN
2530 GOTO 2500                                   >ME
2540 fo=fo+1:IF fo>3 THEN fo=1                   >XH
2550 ON fo GOSUB 2560,2570,2580:GOTO 2470        >GP
2560 fo1$=CHR$(24):fo2$="":fo3$="":RETURN        >JL
2570 fo2$=CHR$(24):fo1$="":fo3$="":RETURN        >JM
2580 fo3$=CHR$(24):fo1$="":fo2$="":RETURN        >JN
2590 CALL &BB03:CLS#1:ON fo GOSUB 2600,2650,2690:CLS#1:GOSUB 4770:GOSUB 4860:GOTO 2450 >PD
2600 tab1=2:tab2=2:GOSUB 4330                    >XN
2610 tab1=2:tab2=6:GOSUB 4360                    >XX
2620 tab1=2:tab2=10:GOSUB 4460                   >YU
2630 AIRE=ROUND(((col+co2)/2)*haut,4):LOCATE #1,2,14:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >TM
2640 CALL &BB06:RETURN                           >RP
2650 tab1=2:tab2=2:GOSUB 4390                    >XA
2660 tab1=2:tab2=8:GOSUB 4460                    >XF
2670 AIRE=ROUND((lo1*haut),4):LOCATE #1,2,12:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >DZ
2680 CALL &BB06:RETURN                           >RU
2690 tab1=2:tab2=2:GOSUB 4330                    >XY
2700 tab1=2:tab2=8:GOSUB 4360                    >XZ
2710 moy=(col+co2)/2:LOCATE #1,2,12:PRINT#1,"La longueur m est de :":PRINT #1,moy;" cm." >DH
2720 CALL &BB06:RETURN                           >RN
2730 ' cercle                                    >YE
2740 MODE 2:GOSUB 4670:GOSUB 4860                >AE
2750 DEG:PLOT 380,200:FOR FX=0 TO 360 STEP 10:DRAW 320+60*COS(FX),200+60*SIN(FX):NEXT >MD
2760 PLOT 320,200:DRAWR -60,0                    >WW
2770 PLOT 320,260:DRAWR 80,0:DRAWR 4,-10:MOVER -8,0:DRAWR 4,10:DRAWR 0,-120:DRAWR 4,10:MOVER -8,0:DRAWR 4,-10:DRAW 320,140 >ZU
2780 LOCATE 37,13:PRINT "r":LOCATE 51,13:PRINT "d" >UK
2790 fo1$=CHR$(24):fo2$="":fo3$="":fo4$="":fo=1 >PJ
2800 LOCATE #3,59,6:PRINT #3,fo1$;"A=(";CHR$(184);".d";CHR$(255);")/4";fo1$ >ZT
2810 LOCATE #3,59,10:PRINT #3,fo2$;"A=";CHR$(184);".r";CHR$(255);fo2$ >RL
2820 LOCATE #3,59,14:PRINT #3,fo3$;"A=0.785*d";CHR$(255);fo3$ >FG
2830 LOCATE #3,59,18:PRINT #3,fo4$;"u=";CHR$(184);".d";fo4$ >EL
2840 IF INKEY(18)=0 THEN 2940                    >WR
2850 IF INKEY(47)=0 THEN 2880                    >WY
2860 IF INKEY(9)=0 THEN CLS:RETURN               >CN
2870 GOTO 2840                                   >NJ
2880 fo=fo+1:IF fo>4 THEN fo=1                   >XR
2890 ON fo GOSUB 2900,2910,2920,2930:GOTO 2800   >MZ
2900 fo1$=CHR$(24):fo2$="":fo3$="":fo4$="":RETURN >TN
2910 fo2$=CHR$(24):fo1$="":fo3$="":fo4$="":RETURN >TX
2920 fo3$=CHR$(24):fo1$="":fo2$="":fo4$="":RETURN >TY
2930 fo4$=CHR$(24):fo1$="":fo2$="":fo3$="":RETURN >TZ
2940 CALL &BB03:CLS#1:ON fo GOSUB 2950,2990,3020,3050:CLS#1:GOSUB 4770:GOSUB 4860:GOTO 2790 >XK
2950 tab1=2:tab2=2:GOSUB 4540                    >XA
2960 aire=ROUND((PI*d2^2)/4,4)                   >ZC
2970 LOCATE #1,2,6:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >KT
2980 CALL &BB06:RETURN                           >RX
2990 tab1=2:tab2=2:GOSUB 4480                    >XH
3000 aire=ROUND((PI*ra^2),4):LOCATE #1,2,6:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >AT
3010 CALL &BB06:RETURN                           >RF
3020 tab1=2:tab2=2:GOSUB 4540                    >XN
3030 aire=ROUND((0.785*D2^2),4):LOCATE #1,2,6:PRINT#1,"L'aire est de :":PRINT #1,aire;" cm";CHR$(255);" ." >EE
3040 CALL &BB06:RETURN                           >RJ
3050 tab1=2:tab2=2:GOSUB 4540                    >XR
3060 per=ROUND(PI*D2,4):LOCATE #1,2,6:PRINT#1,"Le perimetre est":PRINT #1," de :":PRINT #1,per;" cm ." >BQ
3070 CALL &BB06:RETURN                           >RM
3080 ' couronne                                  >YD
3090 MODE 2:GOSUB 4670:GOSUB 4860                >AD
3100 DEG:PLOT 380,200:FOR F%=0 TO 360:PLOT 320+60*COS(F%),200+60*SIN(F%):DRAWR -10*COS(F%),-10*SIN(F%):NEXT >ZA
3110 PLOT 320,260:DRAWR 80,0:DRAWR 4,-10:MOVER -8,0:DRAWR 4,10:DRAWR 0,-120:DRAWR 4,10:MOVER -8,0:DRAWR 4,-10:DRAW 320,140 >Z6
3120 PLOT 320,250:DRAWR -80,0:DRAWR 4,-10:MOVER -8,0:DRAWR 4,10:DRAWR 0,-100:DRAWR 4,10:MOVER -8,0:DRAWR 4,-10:DRAW 320,150 >AW
3130 LOCATE 30,13:PRINT "d":LOCATE 50,13:PRINT"D" >TW
3140 LOCATE #3,59,12:PRINT #3,CHR$(24);"A=(";CHR$(184);"/4).(D";CHR$(255);"-d";CHR$(255);")";CHR$(24) >NZ
3150 IF INKEY(18)=0 THEN 3180                    >WH
3160 IF INKEY(9)=0 THEN CLS:RETURN               >CP
3170 GOTO 3150                                   >MH
3180 CALL &BB03:CLS#1:tab1=2:tab2=2:GOSUB 4540   >PU
3190 tab1=2:tab2=6:GOSUB 4510                    >XY
3200 IF d2>d1 THEN LOCATE #1,1,1:PRINT CHR$(7):GOTO 3180 >Z6
3210 aire=ROUND((PI/4)*(d1^2-d2^2),              >FT
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4)
3220 LOCATE #1,2,10:PRINT#1,"L'aire >LE
 est de :":PRINT #1,aire;" cm";CHR$
(255);" ."
3230 CALL &BB06:CLS#1:GOSUB 4770:GO >WH
SUB 4860:GOTO 3140
3240 'secteur                       >YB
3250 MODE 2:GOSUB 4670:GOSUB 4860   >AB
3260 DEG:PLOT 380,200:FOR F%=0 TO 3 >MA
60 STEP 10:DRAW 320+60*COS(F%),200+
60+SIN(F%):NEXT
3270 FOR F%=45 TO 135:PLOT 320,200: >NB
DRAWR 60*COS(F%),60*SIN(F%):NEXT
3280 PLOT 320+60*COS(160),200+60*SI >CQ
N(160):DRAW 320+60*COS(340),200+60*
SIN(340)
3290 PLOT 320+60*COS(45),200+60*SIN >AQ
(45):DRAW 320+120*COS(45),200+120*S
IN(45)
3300 PLOT 320+80*COS(45),200+80*SIN >FM
(45)
3310 FOR F%=45 TO 135 STEP 10:DRAW  >QK
320+80*COS(F%),200+80*SIN(F%):NEXT
3320 PLOT 320+120*COS(45),200+120*S >HD
IN(45)
3330 FOR F%=45 TO 135 STEP 10:DRAW  >TR
320+120*COS(F%),200+120*SIN(F%):NEX
T
3340 DRAW 320+60*COS(135),200+60*SI >GF
N(45)
3350 LOCATE 41,5:PRINT CHR$(176)    >ZM
3360 LOCATE 41,8:PRINT "b"          >UJ
3370 LOCATE 45,14:PRINT "d"         >VK
3380 fo1$=CHR$(24):fo2$="":fo=1     >YC
3390 LOCATE #3,59,8:PRINT #3,fo1$;" >UJ
A=(b.d)/4";fo1$
3400 LOCATE #3,59,16:PRINT #3,fo2$; >EK
"b=d.";CHR$(184);".(";CHR$(176);"/3
60)";fo2$
3410 IF INKEY(18)=0 THEN 3490       >WL
3420 IF INKEY(47)=0 THEN 3450       >WK
3430 IF INKEY(9)=0 THEN CLS:RETURN  >CP
3440 GOTO 3410                      >MG
3450 fo=fo+1:IF fo>2 THEN fo=1      >XH
3460 ON fo GOSUB 3470,3480:GOTO 339 >CA
0
3470 fo1$=CHR$(24):fo2$="":RETURN   >BM
3480 fo2$=CHR$(24):fo1$="":RETURN   >BN
3490 CALL &BB03:CLS#1:ON fo GOSUB 3 >GB
500,3540:CLS#1:GOSUB 4770:GOSUB 486
0:GOTO 3380
3500 tab1=2:tab2=2:GOSUB 4540       >XR
3510 tab1=2:tab2=6:GOSUB 4570       >XA
3520 aire=ROUND((d2*arc)/4,4):LOCAT >DF
E #1,2,10:PRINT#1,"L'aire est de :"
:PRINT #1,aire;" cm";CHR$(255);" ."
3530 CALL &BB06:RETURN              >RN
3540 tab1=2:tab2=2:GOSUB 4540       >XW
3550 tab1=2:tab2=6:GOSUB 4420       >XY
3560 arc=ROUND((d2*PI)*(angl/360),4 >VR
):LOCATE #1,2,10:PRINT #1,"L'arc b
a une longueur":PRINT #1," de :";ar
c;" cm."
3570 CALL &BB06:RETURN              >RT
3580 ' segment circulaire           >YJ
3590 MODE 2:GOSUB 4670:GOSUB 4860   >AJ
3600 DEG:PLOT 380,200:FOR F%=0 TO 3 >LT
60 STEP 5:DRAW 320+60*COS(F%),200+6
0*SIN(F%):NEXT
3610 FOR F%=30 TO 90 STEP 2:PLOT 32 >DN
0+60*COS(F%),200+60*SIN(F%):DRAW 32
0+60*COS(180-F%),200+60*SIN(180-F%)
:NEXT
3620 PLOT 320+60*COS(30),200+60*SIN >AL
(30):DRAW 320+120*COS(30),200+120*S
IN(30)
3630 FOR F%=30 TO 150 STEP 10:DRAW  >QF
320+80*COS(F%),200+80*SIN(F%):NEXT
3640 PLOT 320+120*COS(30),200+120*S >GE
IN(30)
3650 FOR F%=30 TO 150 STEP 10:DRAW  >TM
320+120*COS(F%),200+120*SIN(F%):NEX
T
3660 DRAW 320+60*COS(150),200+60*SI >GB
N(150)
3670 PLOT 320+60*COS(30),200+60*SIN >GR
(30):DRAWR 0,-40:DRAWR -8,4:MOVER 0
,-8:DRAWR 8,4:DRAW 320+60*COS(150),
160+60*SIN(30):DRAWR 8,4:MOVER 0,-8
:DRAWR -8,4:DRAWR 0,40
3680 PLOT 380,200:DRAWR 0,-80:DRAWR >UY
 -8,4:MOVER 0,-8:DRAWR 8,4:DRAWR -1
20,0:DRAWR 8,4:MOVER 0,-8:DRAWR -8,
4:DRAW 260,200
3690 PRINT CHR$(23);CHR$(1);:PLOT 3 >PC
20,260:DRAWR 0,-30:DRAWR -2,4:MOVER
 4,0:DRAWR -2,-4:MOVER 0,30:DRAWR -
2,-4:MOVER 4,0:DRAWR -2,4
3700 LOCATE 39,10:PRINT CHR$(24);"h >PR
";CHR$(24);
3710 PRINT CHR$(23);CHR$(0);        >WL
3720 LOCATE 40,13:PRINT "s":LOCATE  >UC
40,18:PRINT "d"
3730 LOCATE 41,5:PRINT CHR$(176):LO >YZ
CATE 41,8:PRINT "b"
3740 fo1$=CHR$(24):fo2$="":fo3$="": >FK
fo=1
3750 LOCATE #3,59,6:PRINT #3,fo1$;" >QU
A=((b.d)/4)-"
3760 LOCATE #3,59,7:PRINT #3," (s(d >RU
-2h)/4))";fo1$
3770 LOCATE #3,59,11:PRINT #3,fo2$; >ZG
"h=(d/2).(1-cos(";CHR$(176);"/2))";
fo2$
3780 LOCATE #3,59,16:PRINT #3,fo3$; >PP
"s=d.sin(";CHR$(176);"/2)";fo3$
3790 IF INKEY(18)=0 THEN 3880       >WB
3800 IF INKEY(47)=0 THEN 3830       >WP
3810 IF INKEY(9)=0 THEN CLS:RETURN  >CR
3820 GOTO 3790                      >NF
3830 fo=fo+1:IF fo>3 THEN fo=1      >XL
3840 ON fo GOSUB 3850,3860,3870:GOT >GE
O 3750
3850 fo1$=CHR$(24):fo2$="":fo3$="": >JP
RETURN
3860 fo2$=CHR$(24):fo1$="":fo3$="": >JQ
RETURN
3870 fo3$=CHR$(24):fo1$="":fo2$="": >JR
RETURN
3880 CALL &BB03:CLS#1:ON fo GOSUB 3 >PT
890,3970,4020:CLS#1:GOSUB 4770:GOSU
B 4860:GOTO 3740
3890 tab1=2:tab2=2:GOSUB 4540       >XE
3900 tab1=2:tab2=6:GOSUB 4600       >XX
3910 tab1=2:tab2=10:GOSUB 4460:IF h >MC
aut>d2 THEN LOCATE #1,1,1:PRINT CHR
$(7):GOTO 3910
3920 tab1=2:tab2=14:GOSUB 4570      >YE
3930 aire1=ROUND(((arc*d2)/4),4)    >AL
3940 aire2=ROUND((seg*(d2-2*haut)/4 >HH
),4):IF aire2>aire1 THEN CLS#1:PRIN
T #1:FOR f=1 TO 8:PRINT #1,"DONNEES
 INVALIDES":PRINT #1," RECOMMENCEZ
S.V.P.":NEXT:FOR G=1 TO 3000:NEXT:R
ETURN
3950 aire=ROUND(aire1-aire2,4):LOCA >FT
TE #1,2,20:PRINT#1,"L'aire est de :
":PRINT #1,aire;" cm";CHR$(255);" .
"
3960 CALL &BB06:RETURN              >RW
3970 tab1=2:tab2=2:GOSUB 4540       >XO
3980 tab1=2:tab2=6:GOSUB 4420       >XF
3990 HAUT=ROUND((D2/2)*(1-COS(ANGL/ >KR
2)),4)
4000 LOCATE #1,2,10:PRINT#1,"La hau >AK
teur est de :":PRINT #1,haut;" cm."
4010 CALL &BB06:RETURN              >RG
4020 tab1=2:tab2=2:GOSUB 4540       >XP
4030 tab1=2:tab2=6:GOSUB 4420       >XR
4040 SEG=ROUND(D2*SIN(ANGL/2),4):LO >MR
CATE #1,2,10:PRINT#1,"La mesure du"
:PRINT #1," segment s est de:":PRIN
T #1,seg;" cm."
4050 CALL &BB06:RETURN              >RL
4060 ' ellipse                      >YC
4070 MODE 2:GOSUB 4670:GOSUB 4860   >AC
4080 DEG:PLOT 340,200:FOR F%=0 TO 3 >MT
60 STEP 5:DRAW 320+20*COS(F%),200+1
00*SIN(F%):NEXT
```



```
4090 PLOT 300,200:DRAWR 8,4:MOVER 0 >ZW
,-8:DRAWR -8,4:DRAWR 40,0:DRAWR -8,
4:MOVER 0,-8:DRAWR 8,4
4100 PLOT 320,300:DRAWR -50,0:DRAWR >PD
-4,-8:MOVER 8,0:DRAWR -4,8:DRAWR 0
,-200:DRAWR -4,8:MOVER 8,0:DRAWR -4
,-8:MOVER -4,0:DRAWR 50,0
4110 LOCATE 34,13:PRINT "D":LOCATE  >TC
41,13:PRINT "d"
4120 fo1$=CHR$(24):fo2$="":fo=1     >YV
4130 LOCATE #3,59,8:PRINT #3,fo1$;" >KD
A=(D.d.";CHR$(184);")/4";fo1$
4140 LOCATE #3,59,16:PRINT #3,fo2$; >KH
"u=((D+d)/2).";CHR$(184);fo2$
4150 IF INKEY(18)=0 THEN 4230       >WF
4160 IF INKEY(47)=0 THEN 4190       >WP
4170 IF INKEY(9)=0 THEN CLS:RETURN  >CR
4180 GOTO 4150                      >NA
4190 fo=fo+1:IF fo>2 THEN fo=1      >XK
4200 ON fo GOSUB 4210,4220:GOTO 413 >BD
0
4210 fo1$=CHR$(24):fo2$="":RETURN   >BE
4220 fo2$=CHR$(24):fo1$="":RETURN   >BF
4230 CALL &BB03:CLS#1:GOSUB 4240:CL >TQ
S#1:GOSUB 4770:GOSUB 4860:GOTO 4120

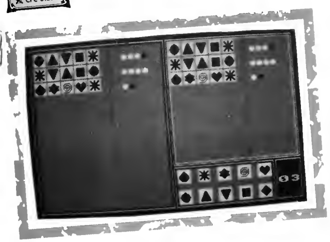
4240 tab1=2:tab2=2:GOSUB 4510       >XQ
4250 tab1=2:tab2=6:GOSUB 4540       >XZ
4260 IF d1<d2 THEN PRINT CHR$(7);:C >RY
LS#1:GOTO 4240
4270 ON fo GOSUB 4280,4300:RETURN   >BC
4280 aire=ROUND((d1*d2*PI)/4,4):LOC >GT
ATE #1,2,10:PRINT#1,"L'aire est de
":PRINT #1,aire;" cm";CHR$(255);"
."
4290 CALL &BB06:RETURN              >RT
4300 per=ROUND(((d1+d2)/2)*PI,4):LO >ZE
CATE #1,2,10:PRINT#1,"Le perimetre
est":PRINT #1," de ";per;" cm."
4310 CALL &BB06:RETURN              >RK
4320 END                            >YH
4330 LOCATE #1,tab1,tab2:PRINT#1,"E >LA
NTREZ LE COTE a en":PRINT#1," cm -
->";:LINE INPUT#1,"",co1$
4340 co1=VAL(co1$):IF co1=0 THEN LO >VF
CATE #1,1,1:PRINT#1,CHR$(7):GOTO 43
30
4350 RETURN                         >FF
4360 LOCATE #1,tab1,tab2:PRINT#1,"E >LF
NTREZ LE COTE b en":PRINT#1," cm -
->";:LINE INPUT#1,"",co2$
4370 co2=VAL(co2$):IF co2=0 THEN LO >WG
CATE #1,1,1:PRINT#1,CHR$(7):GOTO 43
60
4380 RETURN                         >FJ
4390 LOCATE #1,tab1,tab2:PRINT#1,"E >TF
NTREZ LA LONGUEUR m":PRINT#1," en c
m -->";:LINE INPUT#1,"",lo1$
4400 lo1=VAL(lo1$):IF lo1=0 THEN LO >WE
CATE #1,1,1:PRINT#1,CHR$(7):GOTO 43
90
4410 RETURN                         >FC
4420 LOCATE #1,tab1,tab2:PRINT#1,"E >CX
NTREZ L'ANGLE ":CHR$(176):PRINT#1,"
 en DEGRES -->";:LINE INPUT#1,angl
$:angl=VAL(angl$):IF angl=0 THEN LO
CATE #1,1,1:PRINT#1,CHR$(7):GOTO 44
20
4430 RETURN                         >FE
4440 LOCATE #1,tab1,tab2:PRINT#1,"E >CC
NTREZ L'ANGLE ";CHR$(177):PRINT#1,"
 en DEGRES -->";:LINE INPUT#1,angl
$:angl=VAL(angl$):IF angl=0 THEN LO
CATE #1,1,1:PRINT#1,CHR$(7):GOTO 44
40
4450 RETURN                         >FG
4460 LOCATE #1,tab1,tab2:PRINT#1,"E >CV
NTREZ LA HAUTEUR":PRINT#1," en cm
-->";:LINE INPUT#1,haut$:haut=VAL(
haut$):IF haut=0 THEN LOCATE #1,1,1
:PRINT#1,CHR$(7):GOTO 4460
4470 RETURN                         >FJ
4480 LOCATE #1,tab1,tab2:PRINT#1,"E >LZ
NTREZ LE RAYON r en":PRINT#1," cm
-->";:LINE INPUT#1,"",ra$
4490 ra=VAL(ra$):IF ra=0 THEN LOCAT >NH
E #1,1,1:PRINT CHR$(7):GOTO 4480
4500 RETURN                         >FC
4510 LOCATE #1,tab1,tab2:PRINT#1,"E >PT
NTREZ LE DIAMETRE D":PRINT#1," en c
m -->";:LINE INPUT#1,"",D1$
4520 D1=VAL(D1$):IF D1=0 THEN LOCAT >MF
E #1,1,1:PRINT CHR$(7):GOTO 4510
4530 RETURN                         >FF
4540 LOCATE #1,tab1,tab2:PRINT#1,"E >PG
NTREZ LE DIAMETRE d":PRINT#1," en c
m -->";:LINE INPUT#1,"",D2$
4550 D2=VAL(D2$):IF D2=0 THEN LOCAT >MQ
E #1,1,1:PRINT CHR$(7):GOTO 4540
4560 RETURN                         >FJ
4570 LOCATE #1,tab1,tab2:PRINT#1,"E >YU
NTREZ LA LONGUEUR":PRINT#1," D'ARC
b en cm":PRINT #1," -->";:LINE INPU
T#1,"",arc$
4580 arc=VAL(arc$):IF arc=0 THEN LO >TY
CATE #1,1,1:PRINT CHR$(7):GOTO 4570

4590 RETURN                         >GB
4600 LOCATE #1,tab1,tab2:PRINT#1,"E >RX
NTREZ LE SEGMENT s":PRINT#1," en c
m -->";:LINE INPUT#1,"",seg$
4610 seg=VAL(seg$):IF seg=0 THEN LO >TP
CATE #1,1,1:PRINT CHR$(7):GOTO 4600
4620 IF seg/d2 THEN LOCATE #1,1,1:P >AA
RINT CHR$(7):GOTO 4600
4630 RETURN                         >FG
4640 LOCATE #1,tab1,tab2:PRINT#1,"E >DK
NTREZ L'AIRE en":PRINT#1," cm";CHR
$(255);" -->";:LINE INPUT#1,"",aire
$
4650 aire=VAL(aire$):IF aire=0 THEN >AD
 LOCATE #1,1,1:PRINT#1,CHR$(7):GOTO
 4640
4660 RETURN                         >FK
4670                                >YF
4680    dessin contour ecran        >ZA
4690 '                              >ZB
4700 MODE 2:ORIGIN 0,0:PLOT 0,0,13: >MN
DRAWR 639,0:DRAWR 0,399:DRAWR -639,
0:DRAWR 0,-399
4710 PLOT 3,3:DRAWR 633,0:DRAWR 0,3 >HE
93:DRAWR -633,0:DRAWR 0,-393
4720 PLOT 4,80:DRAWR 631,0:PLOTR 0, >TJ
-3:DRAWR -631,0
4730 PLOT 165,3:DRAWR 0,74:PLOTR 3, >QZ
0:DRAWR 0,-74
4740 PLOT 440,80:DRAWR 0,317:PLOTR  >VK
-3,0:DRAWR 0,-317
4750 PLOT 440,355:DRAWR 194,0:PLOTR >WW
 0,-3:DRAWR -194,0
4760 LOCATE 64,2:PRINT "FORMULES"   >CQ
4770 WINDOW #1,2,23,2,19:PAPER #1,1 >RK
:PEN #1,0:CLS #1
4780 LOCATE #1,3,3:PRINT#1,"CHOISIS >UF
SEZ LA BONNE"
4790 LOCATE #1,3,5:PRINT#1,"FORMULE >RE
  AVEC  LA"
4800 LOCATE #1,3,7:PRINT#1,"BARRE D >UZ
'ESPACEMENT."
4810 LOCATE #1,3,13:PRINT#1,"CECI F >UT
AIT , VALIDEZ"
4820 LOCATE #1,3,15:PRINT#1,"PAR EN >JT
TER ."
4830 WINDOW #2,57,79,5,19:PAPER #2, >UA
0:PEN #2,1:CLS #2
4840 WINDOW #4,23,79,22,24:PAPER #4 >UD
,0:PEN #4,1:CLS #4
4850 LOCATE 2,23:PRINT "COPY=RETOUR >ZC
 AU MENU":RETURN
4860 LOCATE #4,1,1:PRINT#4,"A:SURF. >QA
,SECT.  a:LONG.  b:LARG.  r.R:RAYON
  d,D:DIAM."
4870 LOCATE #4,1,3:PRINT#4,"s:EPAIS >UX
.  e:DIAG.  u=PERI.  h=HAUT.  ";CHR
$(176);":ANGLE"
4880 RETURN                         >GD
4890 MODE 2:PRINT:PRINT " VALEUR EN >PH
TREE ERRONEE ... UNE TOUCHE POUR RE
COMMENCER ...":CALL &BB03:CALL &BB0
6:PRINT CHR$(7):RUN
```

Valable pour
CPC 464
CPC 664
CPC 6128

LE CERVEAU

Eric AUBRY



Le Master Mind n'a plus aucun secret pour vous, et puis il y a bien longtemps que vous l'avez laissé de côté. Cela vient sans doute du fait qu'il faut être deux minimum pour y jouer... et vous êtes tout seul ! "Si seulement il existait un jeu du même genre, mais plus complexe, avec la possibilité d'y jouer seul, ça serait super chouette !" Vous avez pensé cela ? Alors c'est gagné !

Le Cerveau vous permet d'affronter un CPC impartial qui choisit au hasard parmi les dix possibles cinq formes que vous devrez découvrir et aligner dans le bon ordre en un minimum d'essais. Votre suggestion sera analysée et vous saurez combien de formes sont bien placées ou non.

Trois niveaux de jeu sont prévus (16, 12 ou 8 coups) pour pousser votre logique à son extrême limite et ainsi vous faire devenir un de nos futurs... cerveaux !

Taper les deux premiers listings : une fois lancés, ceux-ci généreront des fichiers binaires (.BIN) qui seront exploités par le programme principal sauvé sous le nom de "cerveau".

LISTING 1

```
10 '                                  >LA
20 '     LARGEUR CARACTERE            >LB
30 '                                  >LC
40 '                                  >LD
50 DATA 01,09,50,21,E1,70,CD,D1       >XF
60 DATA BC,0D,50,1B,05,43,4B,41       >XZ
70 DATA D2,00,FE,02,C0,CD,06,B9       >YE
80 DATA DD,46,00,21,00,3B,3E,00       >XN
90 DATA BB,28,09,C5,06,0B,23,10       >XQ
100 DATA FD,C1,10,F7,11,D9,50,01      >YB
110 DATA 0B,00,ED,B0,CD,09,B9,DD      >ZB
120 DATA 7E,02,32,E5,50,CD,CC,BB      >YH
130 DATA FD,21,D9,50,06,0B,D5,E5      >YW
140 DATA C5,F5,FD,CB,00,7E,CD,9B      >ZA
150 DATA 50,FD,CB,00,76,CD,9B,50      >YZ
160 DATA FD,CB,00,6E,CD,9B,50,FD      >ZX
170 DATA CB,00,66,CD,9B,50,FD,CB      >ZB
180 DATA 00,5E,CD,9B,50,FD,CB,00      >ZC
190 DATA 56,CD,9B,50,FD,CB,00,4E      >ZP
200 DATA CD,9B,50,FD,CB,00,46,CD      >ZV
210 DATA 9B,50,F1,C1,E1,D1,2B,2B      >YK
220 DATA F5,C5,D5,E5,CD,C9,BB,CD      >ZW
230 DATA CC,BB,E1,D1,C1,F1,FD,23      >ZG
240 DATA 10,AC,C9,2B,19,D5,E5,ED      >ZA
250 DATA 4B,E5,50,C5,21,00,00,11      >YG
260 DATA 01,00,CD,ED,BB,C1,0B,7B      >YD
270 DATA B1,20,F0,E1,D1,C9,D5,E5      >YZ
280 DATA 3E,00,CD,DE,BB,ED,4B,E5      >ZL
290 DATA 50,C5,21,00,00,11,01,00      >XU
300 DATA CD,ED,BB,C1,0B,7B,B1,20      >ZL
310 DATA F0,3E,01,CD,DE,BB,E1,D1      >ZE
320 DATA C9,00,00,00,00,00,00,00      >XE
330 DATA 00,00,00,00,00,00            >RX
340 '                                 >RH
350 'LECTURE DES DONNEES ET CREATIO  >RJ
N RSX
360 '                                 >RK
370 MEMORY &4FFF                      >LC
380 FOR I=1 TO 230:READ V$:POKE &4F  >YM
FF+I,VAL("&"+V$):T=T+VAL("&"+V$):NE
XT I
400 SAVE"CERVEAU2",B,&5000,230        >YN
```

LISTING 2

```
10 A=0                                >FK
20 READ A$:IF A$<>"-1" THEN POKE &6 >JA
000+A,VAL("&"+A$):A=A+1:GOTO 20
30 A=0                                >GB
40 READ A$:IF A$<>"-1" THEN POKE &6 >HL
```

```
2A0+A,VAL("&"+A$):A=A+1:GOTO 40 ELS
E SAVE "CERVEAU4",8,&6000,&320
50 '    CERCLE                        >LE
60 DATA 0F,0F,0F,0F                   >MY
70 DATA 78,F0,F0,E1                   >MR
80 DATA 78,E0,70,E1                   >MA
90 DATA 78,80,10,E1                   >MF
100 DATA 78,0,0,E1                    >LW
110 DATA 68,0,0,61                    >LE
120 DATA 68,0,0,61                    >LF
130 DATA 48,0,0,21                    >LA
140 DATA 48,0,0,21                    >LB
150 DATA 68,0,0,61                    >LJ
160 DATA 68,0,0,61                    >LK
170 DATA 78,0,0,E1                    >LD
180 DATA 78,80,10,E1                  >MC
190 DATA 78,E0,70,E1                  >NQ
200 DATA 78,F0,F0,E1                  >NZ
210 DATA 0F,0F,0F,0F                  >NH
220 '    TRIANGLE                     >RE
230 DATA 0F,0F,0F,0F                  >NK
240 DATA 78,F0,F0,E1                  >ND
250 DATA 78,E0,70,E1                  >NM
260 DATA 78,C0,30,E1                  >NG
270 DATA 78,C0,30,E1                  >NH
280 DATA 78,80,10,E1                  >MD
290 DATA 78,80,10,E1                  >ME
300 DATA 78,0,0,E1                    >LY
310 DATA 78,0,0,E1                    >LZ
320 DATA 68,0,0,61                    >LH
330 DATA 68,0,0,61                    >LJ
340 DATA 48,0,0,21                    >LD
350 DATA 48,0,0,21                    >LE
360 DATA 48,0,0,21                    >LF
370 DATA 78,F0,F0,E1                  >NH
380 DATA 0F,0F,0F,0F                  >NR
390 '    TRIANGLE INVERSE             >TC
400 DATA 0F,0F,0F,0F                  >NJ
410 DATA 78,F0,F0,E1                  >NC
420 DATA 48,0,0,21                    >LC
430 DATA 48,0,0,21                    >LD
440 DATA 48,0,0,21                    >LE
450 DATA 68,0,0,61                    >LM
460 DATA 68,0,0,61                    >LN
470 DATA 78,0,0,E1                    >LG
480 DATA 78,0,0,E1                    >LH
490 DATA 78,80,10,E1                  >MG
500 DATA 78,80,10,E1                  >MY
510 DATA 78,C0,30,E1                  >NE
520 DATA 78,C0,30,E1                  >NF
530 DATA 78,E0,70,E1                  >NN
540 DATA 78,F0,F0,E1                  >NG
550 DATA 0F,0F,0F,0F                  >NQ
560 '    CARRE                        >TB
570 DATA 0F,0F,0F,0F                  >NT
580 DATA 78,F0,F0,E1                  >NL
590 DATA 78,F0,F0,E1                  >NM
600 DATA 68,0,0,61                    >LJ
610 DATA 68,0,0,61                    >LK
620 DATA 68,0,0,61                    >LL
630 DATA 68,0,0,61                    >LM
640 DATA 68,0,0,61                    >LN
650 DATA 68,0,0,61                    >LP
660 DATA 68,0,0,61                    >LQ
670 DATA 68,0,0,61                    >LR
680 DATA 68,0,0,61                    >LT
690 DATA 68,0,0,61                    >LU
700 DATA 78,F0,F0,E1                  >NE
710 DATA 78,F0,F0,E1                  >NF
720 DATA 0F,0F,0F,0F                  >NP
730 '    LOSANGE                      >TA
740 DATA 0F,0F,0F,0F                  >NR
750 DATA 78,F0,F0,E1                  >NK
760 DATA 78,E0,70,E1                  >NU
770 DATA 78,C0,30,E1                  >NN
780 DATA 78,80,10,E1                  >NA
790 DATA 78,0,0,E1                    >LM
800 DATA 68,0,0,61                    >LL
810 DATA 48,0,0,21                    >LF
820 DATA 48,0,0,21                    >LG
830 DATA 68,0,0,61                    >LP
840 DATA 78,0,0,E1                    >LH
850 DATA 78,80,10,E1                  >MG
860 DATA 78,C0,30,E1                  >NN
870 DATA 78,E0,70,E1                  >NW
880 DATA 78,F0,F0,E1                  >NP
890 DATA 0F,0F,0F,0F                  >NY
900 '    PENTAGONE                    >RK
910 DATA 0F,0F,0F,0F                  >NQ
920 DATA 78,F0,F0,E1                  >NJ
930 DATA 78,E0,70,E1                  >NT
940 DATA 78,C0,30,E1                  >NM
950 DATA 78,80,10,E1                  >MH
960 DATA 78,0,0,E1                    >LL
970 DATA 68,0,0,61                    >LV
980 DATA 48,0,0,21                    >LP
990 DATA 48,0,0,21                    >LQ
1000 DATA 48,0,0,21                   >LT
1010 DATA 48,0,0,21                   >LU
1020 DATA 68,0,0,61                   >LB
1030 DATA 78,0,0,E1                   >ML
1040 DATA 78,80,10,E1                 >NM
1050 DATA 78,F0,F0,E1                 >NB
1060 DATA 0F,0F,0F,0F                 >PB
1070 '    ETOILE                      >YA
1080 DATA 0F,0F,0F,0F                 >PD
1090 DATA 78,F0,F0,E1                 >NF
1100 DATA 68,E0,70,61                 >NM
1110 DATA 48,60,60,21                 >NP
1120 DATA 68,20,40,61                 >NQ
1130 DATA 78,0,0,E1                   >MM
1140 DATA 78,80,10,E1                 >NN
1150 DATA 48,0,0,21                   >LZ
1160 DATA 48,0,0,21                   >LA
1170 DATA 78,80,10,E1                 >NR
1180 DATA 78,0,0,E1                   >MT
1190 DATA 68,20,40,61                 >NY
1200 DATA 48,60,60,21                 >NP
1210 DATA 68,E0,70,61                 >NP
1220 DATA 78,F0,F0,E1                 >NA
1230 DATA 0F,0F,0F,0F                 >PA
1240 '    ETOILE DAVID                >XK
1250 DATA 0F,0F,0F,0F                 >PC
1260 DATA 78,F0,F0,E1                 >NE
1270 DATA 78,E0,70,E1                 >NN
1280 DATA 78,C0,30,E1                 >NH
1290 DATA 78,80,10,E1                 >NV
1300 DATA 48,0,0,21                   >LW
1310 DATA 48,0,0,21                   >LX
1320 DATA 68,0,0,61                   >LE
1330 DATA 68,0,0,61                   >LF
1340 DATA 48,0,0,21                   >LA
1350 DATA 48,0,0,21                   >LB
1360 DATA 78,80,10,E1                 >NT
1370 DATA 78,C0,30,E1                 >NH
1380 DATA 78,E0,70,E1                 >NQ
1390 DATA 78,F0,F0,E1                 >PA
1400 DATA 0F,0F,0F,0F                 >NH
1410 '    SPIRALE                     >XJ
1420 DATA 0F,0F,0F,0F                 >PB
1430 DATA 78,F0,F0,E1                 >ND
1440 DATA 78,F0,F0,E1                 >NE
1450 DATA 78,80,10,E1                 >NT
1460 DATA 78,70,E0,E1                 >NP
1470 DATA 68,C0,30,61                 >NR
1480 DATA 68,B0,D0,61                 >NK
1490 DATA 68,A0,50,61                 >NU
1500 DATA 68,80,50,61                 >NL
1510 DATA 68,C0,D0,61                 >NE
1520 DATA 78,70,B0,61                 >NR
1530 DATA 78,80,60,E1                 >NX
1540 DATA 78,F0,D0,E1                 >ND
1550 DATA 68,0,30,E1                  >MV
1560 DATA 78,F0,F0,E1                 >NH
1570 DATA 0F,0F,0F,0F                 >PH
1580 '    COEUR                       >YG
1590 DATA 0F,0F,0F,0F                 >PK
1600 DATA 78,F0,F0,E1                 >NC
1610 DATA 78,F0,F0,E1                 >ND
1620 DATA 78,30,C0,E1                 >NF
1630 DATA 68,10,80,61                 >NA
1640 DATA 48,0,0,21                   >LD
1650 DATA 48,0,0,21                   >LE
1660 DATA 48,0,0,21                   >LF
1670 DATA 48,0,0,21                   >LG
1680 DATA 68,0,0,61                   >MF
1690 DATA 78,0,0,E1                   >MZ
1700 DATA 78,80,10,E1                 >NQ
1710 DATA 78,C0,30,E1                 >NF
1720 DATA 78,E0,70,E1                 >NN
1730 DATA 78,F0,F0,E1                 >NG
```

```
1740 DATA 0F,0F,0F,0F                       >PG
1750 '  PION BLANC                          >YF
1760 DATA 0F,0F,1E,B7                       >PB
1770 DATA 78,E1,78,E1                       >ND
1780 DATA 78,E1,78,E1                       >NE
1790 DATA 1E,B7,0F,0F                       >PE
1800 '  PION NOIR                           >YB
1810 DATA 0F,0F,0E,07                       >NW
1820 DATA 08,01,08,01                       >NN
1830 DATA 08,01,08,01                       >NP
1840 DATA 0E,07,0F,0F                       >NZ
1850 END                                    >ZC
1860 DATA DD,6E,0,DD,66,1,22,7C,A0,  >YE
DD,6E,2,2D,DD,66,4,25,CD,1A,BC,22,7
E,A0,6,10,C5,2A,7C,A0,ED,5B,7E,A0,1
,4,0,ED,B0,2A,7E,A0,CD,26,BC,22,7E,
A0,21,4,0,ED,5B,7C,A0,19,22
1870 DATA 7C,A0,C1,10,DC,C9,DD,6E,0 >DM
,DD,66,1,22,7C,A0,DD,6E,2,2D,DD,66,
4,25,CD,1A,BC,22,7E,A0,6,8,C5,2A,7C
,A0,ED,5B,7E,A0,1,2,0,ED,B0,2A,7E,A
0,CD,26,BC,22,7E,A0,21,2,0,ED
1880 DATA 5B,7C,A0,19,22,7C,A0,C1,1 >LL
0,DC,C9,-1
1890 DATA DD,6E,0,DD,66,1,22,1C,63, >YL
DD,6E,2,2D,DD,66,4,25,CD,1A,BC,22,1
E,63,6,10,C5,2A,1C, 63,ED,5B,1E,63,
1,4,0,ED,B0,2A,1E,63,CD,26,BC,22,1E
,63,21,4,0,ED,5B,1C,63,19,22
1900 DATA 1C,63,C1,10,DC,C9,DD,6E,0 >CH
,DD,66,1,22,1C,63,DD,6E,2,2D,DD,66,
4,25,CD,1A,BC,22,1E,63,6,B,C5,2A,1C
,63,ED,5B,1E,63,1,2,0,ED,B0,2A,1E,6
3,CD,26,BC,22,1E,63,21,2,0,ED
1910 DATA 5B,1C,63,19,22,1C,63,C1,1 >ZC
0,DC,C9,EF,F,20,EC,-1
```

LISTING 3

```
10 '******************************** >LA
************
20 '**         L E   C E R V E A U >LB
       **
30 '**          par  Eric  AUBRY    >LC
       **
40 '******************************** >LD
************
50 GOSUB 3620                        >HH
60 MEMORY &4FFF:LOAD"CERVEAU2",&500 >QZ
0:CALL &5000
70 LOAD"CERVEAU4",&6000:POKE &64D0, >DT
1
80 FOR I=0 TO 20:READ A$:A=VAL("&"+ >BK
A$):POKE &6600+I,A:NEXT
90 DATA DD,4E,00,DD,46,01,DD,5E,02, >TV
DD,56,03,DD,6E,04,DD,66,05,ED,B8,C9

100 INK 0,0:INK 1,24:INK 2,15:INK 3 >CY
,8
110 CLEAR:PAPER 0:PEN 1:MODE 1      >YR
120 LOCATE 6,13:PRINT"VOULEZ-VOUS L >CX
ES EXPLICATIONS ?"
130 A$=UPPER$(INKEY$):IF A$="" THEN >KZ
 GOTO 130
140 IF A$="O" THEN GOTO 2920        >UQ
150 IF A$<>"N" THEN GOTO 130        >UR
160 GOTO 3490                       >GA
170 GOSUB 3690                      >QH
180 CLS:BORDER 10                   >MQ
190 WINDOW #1,2,20,2,24             >QB
200 WINDOW #2,22,39,2,18            >RE
210 WINDOW #3,22,35,20,24           >RD
220 WINDOW#4,37,39,20,24            >RB
230 PAPER#1,2:PAPER#2,2:PAPER#3,2   >BV
240 CLS#1:CLS#2:CLS#3:CLS#4         >WY
250 PLOT 10,386,1:DRAWR 0,-376,1:DR >YX
AWR 314,0,1:DRAWR 0,378,1:DRAWR -31
4,0,1
260 PLOT 330,386,1:DRAWR 0,-280,1:D >ZL
RAWR 298,0,1:DRAWR 0,282,1:DRAWR -2
98,0,1
270 PLOT 330,100,1:DRAWR 0,-90,1:DR >WF
AWR 234,0,1:DRAWR 0,90,1:DRAWR -234
,0,1
280 PLOT 570,100,1:DRAWR 0,-90,1:DR >UC
AWR 58,0,1:DRAWR 0,90,1:DRAWR -58,0
,1
290 PLOT 192,382,3:DRAWR 0,-366,3:P >GF
LOT 512,382,3:DRAWR 0,-272,3
300 GOSUB 790                       >HJ
310 X=336:Y=46:GOSUB 740            >TT
320 FLAGCONT=0:GOSUB 830:GOSUB 920  >CN
330 PERD=0:COUP3=0:COUP=0:CHOIX=0:N >JQ
B=1
340 IF COUP3=COUPMAX THEN GOTO 2670 >DZ

350 A$=INKEY$:IF A$="" THEN GOTO 35 >BC
0
360 IF A$=CHR$(&F3) THEN GOTO 430   >YF
370 IF A$=CHR$(&F2) THEN GOTO 490   >ZD
380 IF A$=CHR$(13) THEN GOSUB 550   >ZT
390 IF A$=CHR$(224) THEN SOUND 1,50 >QM
0,20:CLS#1:ORIGIN 0,0:PLOT 192,382,
3:DRAWR 0,-366,3:FLAGCONT=FLAGCONT
XOR 1:GOSUB 830:GOTO 1420
400 IF A$=CHR$(&9) THEN GOSUB 2060: >KN
GOTO 2170
410 IF A$=CHR$(&7F) THEN SOUND 1,70 >RZ
0,20:GOSUB 2340
420 GOTO 340                        >YK
430 IF X<528 AND Y=46 THEN GOSUB 77 >UZ
0:X=X+48:GOTO 470
440 IF X=528 AND Y=46 THEN GOSUB 77 >ZV
0:X=336:Y=94:GOTO 470
450 IF X<528 AND Y=94 THEN GOSUB 77 >UE
0:X=X+48:GOTO 470
460 IF X=528 AND Y=94 THEN GOSUB 77 >PC
0:X=336:Y=46
470 GOSUB 740                       >JB
480 GOTO 340                        >ZF
490 IF X>336 AND Y=94 THEN GOSUB 77 >UG
0:X=X-48:GOTO 530
500 IF X=336 AND Y=94 THEN GOSUB 77 >ZN
0:X=528:Y=46:GOTO 530
510 IF X>336 AND Y=46 THEN GOSUB 77 >UW
0:X=X-48:GOTO 530
520 IF X=336 AND Y=46 THEN GOSUB 77 >NH
0:X=528:Y=94
530 GOSUB 740                       >HJ
540 GOTO 340                        >ZC
550 '** AFFICHAGE CHOIX JOUEUR      >TA
560 IF CHOIX=5 THEN SOUND 1,250,20: >GK
CHOIX=0:COUP=COUP+1:COUP3=COUP3+1:G
OSUB 2250:NB=1:GOTO 990
570 IF COUP=8 THEN LOCATE #2,22,18: >XC
PRINT #2,CHR$(10):ORIGIN 0,0:PLOT 5
12,382,3:DRAWR 0,-270,3:COUP=COUP-1
580 IF X=336 AND Y=46 THEN CHOIX1(N >AV
B)=1:AD=&6000:GOTO 680
590 IF X=384 AND Y=46 THEN CHOIX1(N >AE
B)=2:AD=&6040:GOTO 680
600 IF X=432 AND Y=46 THEN CHOIX1(N >AV
B)=3:AD=&6080:GOTO 680
610 IF X=480 AND Y=46 THEN CHOIX1(N >AM
B)=4:AD=&60C0:GOTO 680
620 IF X=528 AND Y=46 THEN CHOIX1(N >AY
B)=5:AD=&6100:GOTO 680
630 IF X=336 AND Y=94 THEN CHOIX1(N >AE
B)=6:AD=&6140:GOTO 680
640 IF X=384 AND Y=94 THEN CHOIX1(N >AP
B)=7:AD=&6180:GOTO 680
650 IF X=432 AND Y=94 THEN CHOIX1(N >AX
B)=8:AD=&61C0:GOTO 680
660 IF X=480 AND Y=94 THEN CHOIX1(N >AH
B)=9:AD=&6200:GOTO 680
```

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670 IF X=528 AND Y=94 THEN CHOIX1(N >RY
B)=10:AD=&6240
680 CALL &62A0,22+CHOIX*2,2+COUP*2, >ET
AD
690 CHOIX=CHOIX+1                   >NW
700 SOUND 1,100,20                  >LN
710 NB=NB+1                         >WF
720 RETURN                          >ZE
730 '** DESSIN DU CADRE SELECTION   >TA
740 ORIGIN 0,0:PLOT X,Y,3:DRAWR 0,- >ET
30,3:DRAWR 30,0,3:DRAWR 0,30,3:DRAW
R -30,0,3
750 RETURN                          >ZH
760 '** EFFACEMENT DU CADRE SELECTI >TD
ON
770 ORIGIN 0,0:PLOT X,Y,1:DRAWR 0,- >EK
30,1:DRAWR 30,0,1:DRAWR 0,30,1:DRAW
R -30,0,1
780 RETURN                          >AA
790 '** AFFICHAGE DES FORMES        >TG
800 FOR I=0 TO 4:CALL &62A0,22+I*3, >VX
23,&6000+I*64:NEXT
810 FOR I=0 TO 4:CALL &62A0,22+I*3, >VA
20,&6140+I*64:NEXT
820 RETURN                          >ZF
830 '** CONTOUR CHOIXJEU/CONSUTATIO >TE
N
840 ORIGIN 0,0:IF FLAGCONT=1 THEN G >JD
OTO 860
850 IF FLAGCONT=0 THEN GOTO 890     >YA
860 PLOT 334,384,0:DRAWR 0,-274,0:D >ZB
RAWR 290,0,0:DRAWR 0,274,0:DRAWR -2
90,0,0
870 PLOT 14,384,1:DRAWR 0,-370,1:DR >YV
AWR 306,0,1:DRAWR 0,370,1:DRAWR -30
6,0,1
880 RETURN                          >AB
890 PLOT 14,384,0:DRAWR 0,-370,0:DR >YR
AWR 306,0,0:DRAWR 0,370,0:DRAWR -30
6,0,0
900 PLOT 334,384,1:DRAWR 0,-274,1:D >ZB
RAWR 290,0,1:DRAWR 0,274,1:DRAWR -2
90,0,1
910 RETURN                          >ZF
920 '** CHOIX ORDINATEUR            >TB
930 'RANDOMIZE TIME                 >TC
940 FOR I=0 TO 4                    >WC
950 A(I)=INT(RND*10)+1              >QT
960 POKE &6320+I,A(I)               >PA
970 NEXT                            >FB
980 RETURN                          >AC
990 '** ANALYSE CHOIX JOUEUR        >TJ
1000 FOR I=0 TO 4:A(I)=0:R(I+1)=0:N >EJ
EXT
1010 FOR I=0 TO 4                   >BC
1020 IF CHOIX1(I+1)=PEEK(&6320+I) T >XK
HEN A(I)=1:R(I+1)=2
1030 NEXT                           >KF
1040 IF R(1)=2 AND R(2)=2 AND R(3)= >NG
2 AND R(4)=2 AND R(5)=2 THEN GOTO 2
410
1050 J=1                            >VD
1060 I=0                            >VC
1070 IF R(J)=2 THEN I=0:GOSUB 1160: >KR
GOTO 1070
1080 IF A(I)=1 THEN GOTO 1150       >VE
1090 IF CHOIX1(J)=PEEK(&6320+I) THE >MW
N GOTO 1110
1100 IF I=4 THEN GOSUB 1160:GOTO 10 >AD
60 ELSE I=I+1:GOTO 1080
1110 A(I)=1                         >NF
1120 R(J)=1                         >QE
1130 IF J=5 THEN GOTO 1170 ELSE J=J >CA
+1
1140 GOTO 1060                      >MA
1150 IF I=4 THEN GOSUB 1160:GOTO 10 >AJ
60 ELSE I=I+1:GOTO 1080
1160 IF J=5 THEN GOTO 1170 ELSE J=J >LF
+1:RETURN
1170 I=1:J=1:AD=&6320+10*COUP3      >YA
1180 IF R(I)=1 THEN POKE AD+J-1,R(I >MJ
):GOTO 1210
1190 IF R(I)=2 THEN IF I<>6 THEN I= >NU
I+1:GOTO 1180
1200 IF R(I)=0 THEN IF I<>6 THEN PO >BX
KE AD+J-1,R(I):GOTO 1210
1210 IF I<>6 THEN J=J+1:I=I+1:GOTO  >FA
1180
1220 I=1                            >VB
1230 IF R(I)=2 THEN POKE AD+J-1,R(I >ML
):GOTO 1260
1240 IF R(I)=1 THEN IF I<>6 THEN I= >NJ
I+1:GOTO 1230
1250 IF R(I)=0 THEN IF I<>6 THEN I= >NJ
I+1:GOTO 1230
1260 IF I<>6 THEN J=J+1:I=I+1:GOTO  >FB
1230
1270 J=1                            >VH
1280 FOR I=10 TO 6 STEP -1          >RK
1290 POKE &6325+10*COUP3-I,CHOIX1(J >DB
)
1300 J=J+1                          >JH
1310 NEXT                           >KG
1320 I=5:K=5                        >BF
1330 JEU=PEEK(&6325+(COUP3-1)*10+I) >CZ

1340 IF JEU=1 THEN AD=&6280:J=1     >YT
1350 IF JEU=2 THEN AD=&6290:J=2     >YX
1360 IF JEU=0 THEN J=0              >PG
1370 IF I=10 THEN GOTO 1410 ELSE I= >KL
I+1:K=K+1
1380 IF J=0 THEN K=K-1:GOTO 1330    >YX
1390 CALL &62DE,28+K,1+COUP*2,AD    >ZN
1400 IF I<>10 THEN GOTO 1330        >UQ
1410 SOUND 1,500,20:GOTO 340        >VT
1420 ** RECAPITULATIF JEU           >XK
1430 IF COUP3>11 THEN COUP4=11:SURP >UD
LUS=1 ELSE COUP4=COUP3:SURPLUS=0
1440 COUP2=COUP4:COUP1=1            >VK
1450 IF COUP2=0 THEN GOTO 1610      >XX
1460 FOR I=0 TO 4                   >CB
1470 JEU=PEEK(&6325+(COUP1-1)*10+I) >CC

1480 GOSUB 2810                     >XG
1490 CALL &62A0,(I+1)*2,COUP1*2,AD  >AM
1500 NEXT                           >KH
1510 I=5:K=5                        >BG
1520 JEU=PEEK(&6325+(COUP1-1)*10+I) >CY

1530 IF JEU=1 THEN AD=&6280:J=1     >YU
1540 IF JEU=2 THEN AD=&6290:J=2     >YY
1550 IF JEU=0 THEN J=0              >PH
1560 IF I=10 THEN GOTO 1600 ELSE I= >KN
I+1:K=K+1
1570 IF J=0 THEN K=K-1:GOTO 1520    >YZ
1580 CALL &62DE,9+K,COUP1*2+1,AD    >ZX
1590 IF I<>10 THEN GOTO 1520        >UC
1600 COUP2=COUP2-1:COUP1=COUP1+1:GO >MU
TO 1450
1610 IF SURPLUS=0 THEN SOUND 1,500, >JV
20:FLAGCONT=FLAGCONT XOR 1:GOSUB 83
0:GOTO 340
1620 A$=INKEY$:IF A$="" THEN GOTO 1 >DT
620
1630 IF A$=CHR$(224) THEN SOUND 1,5 >LQ
00,20:FLAGCONT=FLAGCONT XOR 1:GOSUB
 830:GOTO 340
1640 IF A$=CHR$(&F1) THEN GOTO 1680 >AW

1650 IF A$=CHR$(&F0) THEN GOTO 1860 >AW

1660 IF A$=CHR$(&9) THEN GOTO 2060  >ZX
1670 GOTO 1620                      >NA
1680 '*********** DESCENTE          >YH
1690 IF COUP4=COUP3 THEN SURPLUS=0: >AG
GOTO 1620 ELSE COUP4=COUP4+1:MONTEE
=0
1700 LOCATE#1,2,24:PRINT#1,CHR$(10) >LU
:PLOT 192,382,3:DRAWR 0,-366,3
1710 FOR I=0 TO 4                   >BK
1720 JEU=PEEK(&6325+(COUP4-1)*10+I) >CD

1730 GOSUB 2810                     >XE
1740 CALL &62A0,(I+1)*2,22,AD       >VX
1750 NEXT                           >LE
1760 I=5:K=5                        >CD
1770 JEU=PEEK(&6325+(COUP4-1)*10+I) >CJ

1780 IF JEU=1 THEN AD=&6280:J=1     >YB
1790 IF JEU=2 THEN AD=&6290:J=2     >YF
1800 IF JEU=0 THEN J=0              >PF
```

```
1810 IF I=10 THEN GOTO 1850 ELSE I= >KU
I+1:K=K+1
1820 IF J=0 THEN K=K-1:GOTO 1770    >YE
1830 CALL &62DE,9+K,23,AD           >TV
1840 IF I<>10 THEN GOTO 1770        >UH
1850 GOTO 1620                      >NA
1860 '*********** MONTEE            >YH
1870 IF MONTEE=1 THEN GOTO 1890     >YQ
1880 COUP5=COUP4-10                 >PB
1890 IF COUP5=1 THEN GOTO 1620 ELSE >ZD
 COUP5=COUP5-1:COUP4=COUP4-1:MONTEE
=1
1900 LOCATE#1,1,1:PRINT#1,CHR$(11): >RD
LOCATE#1,1,1:PRINT#1,CHR$(11):PLOT
192,382,3:DRAWR 0,-366,3:LOCATE#1,1
,23:PRINT#1,"            "
1910 FOR I=0 TO 4                   >CB
1920 JEU=PEEK(&6325+(COUP5-1)*10+I) >CG

1930 GOSUB 2810                     >XG
1940 CALL &62A0,(I+1)*2,2,AD        >UX
1950 NEXT                           >LG
1960 I=5:K=5                        >CF
1970 JEU=PEEK(&6325+(COUP5-1)*10+I) >CM

1980 IF JEU=1 THEN AD=&6280:J=1     >YD
1990 IF JEU=2 THEN AD=&6290:J=2     >YH
2000 IF JEU=0 THEN J=0              >PY
2010 IF I=10 THEN GOTO 2050 ELSE I= >KD
I+1:K=K+1
2020 IF J=0 THEN K=K-1:GOTO 1970    >YZ
2030 CALL &62DE,9+K,3,AD            >RP
2040 IF I<>10 THEN GOTO 1970        >UC
2050 GOTO 1620                      >MD
2060 '*********** SOLUTION          >YA
2070 CLS#3                          >LD
2080 LOCATE#3,1,1:PRINT#3,"     Voic >ER
i     la Solution:"
2090 FOR I=0 TO 4                   >CB
2100 JEU=PEEK(&6320+I)              >QU
2110 GOSUB 2810                     >WH
2120 CALL &62A0,24+(I*2),22,AD      >WN
2130 NEXT                           >KH
2140 LOCATE#3,5,5:PRINT#3,"<ENTER>" >EB

2150 WHILE INKEY$<>CHR$(13):WEND    >BG
2160 RETURN                         >FC
2170 CLS#1:LOCATE#1,2,10:PRINT#1,"V >HJ
oulez-vous refaire"
2180 LOCATE#1,4,12:PRINT#1,"une par >NE
tie ?"
2190 A$=UPPER$(INKEY$)              >RB
2200 IF A$=""THEN GOTO 2190         >UP
2210 IF A$="O" THEN GOTO 110        >UY
2220 IF A$="N" THEN MODE 2:END      >WQ
2230 GOTO 2190                      >MG
2240 END                            >YG
2250 '******** NOMBRE DE COUPS      >YB
2260 SCORE$=STR$(COUP3)             >TK
2270 IF COUP3<10 THEN SCORE$="0"+SC >KT
ORE$:SCORE$=LEFT$(SCORE$,1)+RIGHT$(
SCORE$,1)
2280 SCORE$=RIGHT$(SCORE$,2)        >XZ
2290 ORIGIN 576,60                  >MA
2300 CALL &5015,3,ASC(LEFT$(SCORE$, >FJ
1))
2310 ORIGIN 602,60                  >MG
2320 CALL &5015,3,ASC(RIGHT$(SCORE$ >GK
,1))
2330 RETURN                         >FB
2340 '********* CORRECTION          >YB
2350 PAPER 2                        >AA
2360 IF NB=1 THEN RETURN            >TT
2370 NB=NB-1:CHOIX=CHOIX-1          >WV
2380 LOCATE 22+CHOIX*2,2+COUP*2:PRI >KH
NT" "
2390 LOCATE 22+CHOIX*2,3+COUP*2:PRI >KK
NT" "
2400 RETURN                         >EK
2410 '********* GAGNE               >XK
2420 CLS#3:SOUND 1,400,15:SOUND 1,3 >LB
00,15:SOUND 1,200,15:SOUND 1,100,15
:SOUND 1,200,15:SOUND 1,100,15
2430 LOCATE#3,1,2:PRINT#3,"    EXAC >GJ
T !"
2440 FOR I=0 TO 4                   >CA
2450 JEU=PEEK(&6320+I)              >QC
2460 GOSUB 2810                     >XF
2470 CALL &62A0,24+(I*2),22,AD      >WE
2480 NEXT                           >LF
2490 WHILE INKEY$<>"":WEND          >VX
2500 CLS#1                          >KK
2510 LOCATE#1,6,3:PRINT#1,"BRAVO !! >EG
!"
2520 LOCATE#1,3,6:PRINT#1,"VOUS AVE >PB
Z GAGNE "
2530 LOCATE#1,9,8:PRINT#1,"EN"      >YT
2540 LOCATE#1,6,10:PRINT#1,SCORE$;" >MT
 COUPS"
2550 LOCATE#1,2,10:PRINT#1,"Voulez- >ZG
vous voir le
2560 LOCATE#1,4,12:PRINT#1,"classem >PV
ent ?"
2570 A$=UPPER$(INKEY$)              >RD
2580 IF A$="" THEN GOTO 2570        >UR
2590 IF A$="O" THEN GOTO 3920       >VY
2600 IF A$<>"N" THEN GOTO 2570      >WA
2610 GOSUB 4340                     >XC
2620 LOCATE#1,2,10:PRINT#1,"Voulez- >BA
vous refaire"
2630 LOCATE#1,4,12:PRINT#1,"une par >NE
tie ?"
2640 IF A$="O" THEN GOTO 110        >UF
2650 IF A$="N" THEN :MODE 2:END     >XK
2660 GOTO 2640                      >ND
2670 '*********** PERDU             >YH
2680 GOSUB 2060                     >XG
2690 CLS#1                          >LF
2700 PRINT#1,"      Dommage,":PRINT# >FE
1
2710 PRINT#1,"   Vous n avez pas":P >PY
RINT#1
2720 PRINT#1,"r(ussi @ trouver la"  >KJ
2730 PRINT#1,"       SOLUTION"      >XL
2740 LOCATE#1,2,10:PRINT#1,"Voulez- >BD
vous refaire"
2750 LOCATE#1,4,12:PRINT#1,"une par >NH
tie ?"
2760 A$=UPPER$(INKEY$)              >RE
2770 IF A$="" THEN GOTO 2760        >UU
2780 IF A$="O" THEN GOTO 110        >UL
2790 IF A$="N" THEN MODE 2:END      >WD
2800 GOTO 2760                      >NC
2810 '********* TRADUCTION Numero-  >YD
>Adresse
2820 IF JEU=1 THEN AD=&6000:RETURN  >CF
2830 IF JEU=2 THEN AD=&6040:RETURN  >CM
2840 IF JEU=3 THEN AD=&6080:RETURN  >CU
2850 IF JEU=4 THEN AD=&60C0:RETURN  >CH
2860 IF JEU=5 THEN AD=&6100:RETURN  >CQ
2870 IF JEU=6 THEN AD=&6140:RETURN  >CX
2880 IF JEU=7 THEN AD=&6180:RETURN  >CD
2890 IF JEU=8 THEN AD=&61C0:RETURN  >CT
2900 IF JEU=9 THEN AD=&6200:RETURN  >CQ
2910 IF JEU=10 THEN AD=&6240:RETURN >CA

2920 '*********** EXPLICATIONS      >YF
2930 MODE 2:INK 1,0                 >ML
2940 TEXT$="LE CERVEAU":FOR I=1 TO  >DJ
8
2950 FOR J=1 TO LEN(TEXT$)          >UP
2960 ORIGIN 300-(I*45)+J*(8*I),414- >EA
I*16
2970 CALL &5015,I,ASC(MID$(TEXT$,J, >RE
1)):SOUND 1,INT((RND(1)+1)*100),10
2980 NEXT J                         >WF
2990 NEXT I                         >WF
3000 LOCATE 32,9:PRINT"par AUBRY Er >KZ
ic"
3010 WINDOW#1,2,79,10,24:PAPER#1,1: >TA
PEN#1,0:CLS#1
3020 PRINT#1,"  Ce jeu est directe >LQ
ment inspir( du c{l}bre MASTER-MIND
 .Sauf qu'ici nous ne  jouons pas a
vec des combinaisons de couleurs ma
is de formes .L'ordinateur     nous
 propose de choisir parmis 10 forme
s possibles ."
3030 PRINT#1                        >GC
3040 PRINT#1,"  Le but du jeu est d >LB
e d(couvrir une combinaison de 5 fo
```

```
rmes que l'ordinateur  a choisi ,et
 ce le plus rapidement possible ."
3050 PRINT#1                          >GE
3060 PRINT#1,"  Pour faire votre ch >ZY
oix parmis les formes propos(es ,il
 suffit de d(placer    le carr( de
s(lection jusqu'@ la forme voulue a
vec les fl(ches gauche et      droi
te puis de la valider par la touche
 'ENTER' ."
3070 PRINT#1:PRINT#1,"  Si jamais v >HB
ous voulez effacer une forme pr(c(d
emment valid(e ,appuyez sur    la t
ouche 'DEL'."
3080 LOCATE#1,49,14:PRINT#1,"Presse >TY
z <ENTER>"
3090 INK 1,24:WHILE INKEY$<>CHR$(13 >KE
):WEND
3100 CLS#1                            >KG
3110 PRINT#1,"  Lorsque vous voule >BJ
z revoir les coups ant(rieurs ,appu
yez sur la touche  'COPY' .Si t
ous les coups peuvent (tre affich(s
 ,l'ordinateur revient auto-   -mat
iquement en mode jeu ."
3120 PRINT#1                          >GC
3130 PRINT#1,"  Si tous les coups n >XB
e peuvent (tre affich(s ,vous pouve
z :"
3140 PRINT#1                          >GE
3150 PRINT#1,"        - pressez '" >GU
;CHR$(240);"': vous remontez dans l
es coups jou(s"
3160 PRINT#1                          >GG
3170 PRINT#1,"        - pressez '" >HC
;CHR$(241);"': vous descendez dans
les coups jou(s"
3180 PRINT#1                          >GJ
3190 PRINT#1,"        - pressez 'C >BG
OPY' : vous revenez en mode jeu"
3200 LOCATE#1,49,14:PRINT#1,"Presse >TR
z <ENTER>"
3210 WHILE INKEY$<>CHR$(13):WEND    >BE
3220 CLS#1                            >KK
3230 PRINT#1,"  Si vous 'donnez vo >BA
tre langue au chat' ,appuyez sur la
 touche 'TAB' .L'or-   -dinateur af
fichera la solution ."
3240 PRINT#1                          >GF
3250 PRINT#1,"  Le nombre de coups >LH
 maximum dont vous disposez d(pend
du niveau que vous      avez choisi
:"
3260 PRINT#1                          >GH
3270 PRINT#1,"                       >LR
- D(butant..........16 coups"
3280 PRINT#1                          >GK
3290 PRINT#1,"                       >LK
- Confirm(..........12 coups"
3300 PRINT#1                          >GC
3310 PRINT#1,"                       >JY
- Expert............08 coups"
3320 PRINT#1                          >GE
3330 PRINT#1,"  Le nombre de coups >FN
 jou(s est en permanence affich( da
ns le bas de l'(cran ."
3340 LOCATE#1,49,14:PRINT#1,"Presse >TX
z <ENTER>"
3350 WHILE INKEY$<>CHR$(13):WEND    >BK
3360 CLS#1                            >LE
3370 PRINT#1,"   Pour valider une c >HJ
ombinaison ,appuyez sur  ENTER'"
3380 PRINT#1                          >HA
3390 PRINT#1," L'ordinateur r(pond >UD
@ la combinaison que vous lui avez
soumis par des pions   blancs et de
s pions noirs ."
3400 PRINT#1                          >GD
3410 PRINT#1,"          - Pion blan >YV
c : la couleur est pr(sente dans la
 combinaison @       trouver mais
 elle est mal plac(e ."
3420 PRINT#1                          >GF
3430 PRINT#1,"          - Pion noir >VX
 : la couleur est pr(sente dans la
 combinaison @       trouver et e
lle est bien plac(e ."
3440 PRINT#1                          >GH
3450 PRINT#1,"                       >KT
  Voil@ ,@ vous de jouer !"
3460 LOCATE#1,49,14:PRINT#1,"Presse >TA
z <ENTER>"
3470 WHILE INKEY$<>CHR$(13):WEND    >BN
3480 MODE 1:GOTO 160                 >ND
3490 '*********** NIVEAU DE JEU     >YJ
3500 CLS                              >ZH
3510 LOCATE 11,2:PRINT "Quel niveau >TR
 de jeu"
3520 LOCATE 11,4:PRINT " d(sirez-v >PC
ous ?"
3530 LOCATE 1,10:PRINT"      <1>.. >MG
.DEBUTANT...16 coups":PRINT
3540 PRINT"      <2>...CONFIRME... >XA
12 coups":PRINT
3550 PRINT"      <3>... EXPERT ... >WC
08 coups":PRINT
3560 A$=INKEY$                        >WJ
3570 IF A$<"1" OR A$>"3" THEN GOTO >CQ
3560
3580 IF A$="1" THEN COUPMAX=16      >XK
3590 IF A$="2" THEN COUPMAX=12      >XH
3600 IF A$="3" THEN COUPMAX=8       >WE
3610 GOTO 170                         >FD
3620 '*********** CARACTERES FRANCA >YD
IS
3630 SYMBOL AFTER 64                  >PC
3640 SYMBOL 64,&60,&10,&78,&C,&7C,& >GV
CC,&76
3650 SYMBOL 123,&6,&B,&3C,&66,&7E,& >GB
60,&3C
3660 SYMBOL 125,&60,&10,&3C,&66,&7E >JB
,&60,&3C
3670 SYMBOL 91,&18,&24,&3C,&66,&7E, >HY
&60,&3C
3680 RETURN                           >GA
3690 '********** TABLEAU DE CLASSEM >ZA
ENT
3700 MODE 1                           >PF
3710 LOCATE 13,10:PRINT"Donnez votr >UC
e nom :"
3720 LOCATE 16,12:PRINT".........." >BU

3730 J=0:B$=""                        >JH
3740 LOCATE 16+J,12:PRINT CHR$(24); >PR
".";CHR$(24)
3750 A$=UPPER$(INKEY$):IF A$="" THE >MD
N GOTO 3750
3760 IF A$=CHR$(&7F) THEN GOTO 3840 >AH

3770 IF A$=CHR$(13) THEN GOTO 3890  >ZV
3780 IF J=10 THEN GOTO 3750         >UW
3790 LOCATE 16+J,12:PRINT A$        >WL
3800 J=J+1                            >KE
3810 B$=B$+A$                         >AK
3820 IF J=10 THEN GOTO 3750         >UQ
3830 GOTO 3740                        >NF
3840 IF J=0 THEN GOTO 3750          >TX
3850 IF J=10 THEN GOTO 3870         >UX
3860 LOCATE 16+J,12:PRINT"."        >WB
3870 B$=LEFT$(B$,LEN(B$)-1)         >VJ
3880 J=J-1:GOTO 3740                >NM
3890 B$=B$+STRING$(10-LEN(B$),"*")  >BA
3900 NOM$=B$                          >CA
3910 MODE 1:RETURN                    >NV
3920 '*********** CLASSEMENT        >YG
3930 NB=PEEK(&64D0):IF NB=1 THEN A= >MH
1:GOTO 4030
3940 FOR A=1 TO NB                    >LD
3950 SCORE=PEEK(&64D0+A*11)          >WF
3960 IF COUP3<=SCORE THEN INF=1:GOT >JF
O 3980
3970 NEXT A:INF=0:GOTO 4020          >VA
3980 INF=1:ADR=&64D0+A+(A-1)*10:LON >RZ
G=&65AD-ADR+1
3990 FOR I=0 TO 10                    >LQ
4000 CALL &6600,&65AD,&65AE,LONG    >ZF
4010 NEXT                             >KG
4020 IF INF=0 THEN A=NB              >QF
4030 FOR I=1 TO 10                    >LB
4040 A$=MID$(NOM$,I,1)               >QC
4050 POKE &64D0+(I-1)+A+((A-1)*10), >GD
```



```
ASC(A$)
4060 NEXT I                               >VF
4070 MODE 2:INK 1,0                       >MH
4080 TEXT$="LE CERVEAU":FOR I=1 TO        >DZ
2
4090 FOR J=1 TO LEN(TEXT$)                >UL
4100 ORIGIN 90-(I*45)+J*(8*I),250-I       >DF
*16
4110 CALL &5015,I,ASC(MID$(TEXT$,J,       >RR
1)):SOUND 1,INT((RND(1)+1)*100),10
4120 ORIGIN 520-(I*45)+J*(8*I),250-       >ER
I*16
4130 CALL &5015,I,ASC(MID$(TEXT$,J,       >RU
1)):SOUND 1,INT((RND(1)+1)*100),10
4140 NEXT J                               >VF
4150 NEXT I                               >VF
4160 FOR J=1 TO LEN(TEXT$)                >UJ
4170 ORIGIN 45+J*8,202                    >QJ
4180 CALL &5015,1,ASC(MID$(TEXT$,J,       >RY
1)):SOUND 1,INT((RND(1)+1)*100),10
4190 ORIGIN 475+J*8,202                   >QW
4200 CALL &5015,1,ASC(MID$(TEXT$,J,       >RQ
1)):SOUND 1,INT((RND(1)+1)*100),10
4210 NEXT J                               >VD
4220 TEXT$="Appuyez sur une touche"       >MQ

4230 FOR J=1 TO LEN(TEXT$)                >UG
4240 ORIGIN 40+J*24,19                    >QF
4250 CALL &5015,3,ASC(MID$(TEXT$,J,       >RY
1)):SOUND 1,INT((RND(1)+1)*100),10
4260 NEXT J                               >VJ
4270 ORIGIN 0,0                           >YE
4280 PLOT 199,368,1:DRAWR 209,0,1:D       >XC
RAWR 0,-338,1:PLOTR 1,0,1:DRAWR 0,3
38,1
4290 PLOT 408,30,1:DRAWR -209,0,1:D       >YB
RAWR 0,338,1:PLOTR -1,0,1:DRAWR 0,-
338,1
4300 PLOT 198,368,1:DRAWR 0,20,1:PL       >WM
OTR 1,0,1:DRAWR 0,-20,1:PLOT 198,38
8,1
4310 DRAWR 210,0,1:DRAWR 0,-20,1:PL       >AD
OTR 1,0,1:DRAWR 0,20,1
4320 PLOT 299,388,1:DRAWR 0,-358,1:       >DZ
PLOTR 1,0,1:DRAWR 0,358,1
4330 TAG                                  >ZD
4340 PLOT 200,384                         >LK
4350 PRINT"    NOM     ";                 >RB
4360 PLOT 303,384                         >LR
4370 PRINT" NB DE COUPS ";                >VL
4380 TAGOFF                               >BH
4390 POKE &64D0+A*11,COUP3                >UR
4400 FOR I=1 TO NB                        >LD
4410 LOCATE 27,2+I                        >ML
4420 FOR J=1 TO 10                        >LF
4430 PRINT CHR$(PEEK(&64D0+J+(I-1)*       >GQ
11));
4440 NEXT J                               >VJ
4450 LOCATE 44,2+I                        >MP
4460 PRINT PEEK(&64D8+(I-1)*11)           >YX
4470 NEXT 1                               >WA
4480 IF INF=0 THEN LOCATE 26,2+NB E       >UT
LSE LOCATE 26,2+A
4490 PRINT">"                             >PC
4500 IF INF=0 THEN LOCATE 37,2+NB E       >UP
LSE LOCATE 37,2+A
4510 PRINT"<"                             >ND
4520 IF INF=0 THEN LOCATE 39,2+NB E       >UW
LSE LOCATE 39,2+A
4530 PRINT">>>>>>"                        >NH
4540 IF INF=0 THEN LOCATE 47,2+NB E       >UW
LSE LOCATE 47,2+A
4550 PRINT"<<<<<":INK 1,24                >UF
4560 WHILE INKEY$="":WEND                 >VC
4570 MODE 1:NB=NB+1:IF NB>20 THEN N       >FT
B=20
4580 POKE &64D0,NB                        >MT
4590 LOCATE 7,12:PRINT"Voulez-vous        >PH
refaire une partie ?"
4600 A$=UPPER$(INKEY$):IF A$="" THE       >MT
N GOTO 4600
4610 IF A$="D" THEN GOTO 110              >UE
4620 IF A$<>"N" THEN GOTO 4560            >WF
4630 MODE 2:END                           >AG
```

BLUE-CARDS

Valable pour
☒ CPC 464
☒ CPC 664
☒ CPC 6128

Manuel DA SILVA

Aurez-vous assez de mémoire visuelle pour réussir à réunir deux par deux chacune des vingt-quatre cartes en moins de 25 coups ? Essayez voir, à la rédaction, nous n'avons pas pu descendre en dessous de 27... Blue-Cards, avec des cartes comportant des dessins ou des mots, du brainstorming en perspective pour les jours de pluie.




```
10 REM ******************************  >YH
*
20 REM ***                          ** >DJ
*
30 REM ***      BLUE-CARDS          ** >TE
*
40 REM ***                          ** >EA
*
50 REM ***    (C) 1988 NOGENT       ** >VK
*
60 REM ***                          ** >EC
*
70 REM ***      D.S. MANUEL         ** >TQ
*
80 REM ***                          ** >EE
*
90 REM ****************************** >ZH
*
100 REM                                >TH
110 MODE 0:CLEAR:CALL &BC02:PAPER 0    >XX
:PEN 1:C=2:B=3:I=1
120 INK 0,0:INK 1,26:INK 2,4:INK 3,    >MR
12:BORDER 0:PAPER 0:IV$=CHR$(24)
130 CALL &BB48:POKE &BDEE,&C9          >WX
140 SYMBOL AFTER 32                    >NC
150 SYMBOL 110,6,6,6,6,6,102,60,0      >ZJ
160 SYMBOL 112,104,96,96,96,96,98,2    >ED
54,0
170 SYMBOL 117,60,102,96,96,96,96,3    >EA
2,28
180 SYMBOL 118,0,0,0,0,0,0,254,254     >AH
190 SYMBOL 119,254,98,96,96,96,96,1    >GT
04,120
200 SYMBOL 124,126,102,102,102,102,    >JJ
102,102,0
210 SYMBOL 125,102,102,102,102,102,    >LG
102,252,252
220 SYMBOL 126,192,192,192,192,192,    >JJ
102,60,0
230 SYMBOL 127,102,102,102,102,102,    >JC
108,248,0
240 SYMBOL 128,96,96,96,98,102,254,    >EN
```




```
254
250 SYMBOL 129,102,102,102,102,102, >HA
102,60,0
260 SYMBOL 130,108,102,102,102,102, >JV
102,226,0
270 SYMBOL 131,24,60,102,102,102,10 >JF
2,126,126
280 SYMBOL 132,252,102,102,102,102, >LM
100,124,124
290 SYMBOL 133,60,102,192,192,192,1 >LL
92,192,192
300 SYMBOL 134,248,108,102,102,102, >LM
102,102,102
310 SYMBOL 135,240,240,96,96,96,96, >FC
96,96
320 SYMBOL 136,102,102,102,102,102, >LY
102,102,102
330 SYMBOL 137,252,102,102,102,102, >LQ
102,124,124
340 X$="PRESSEZ UNE TOUCHE ":Z$=X$  >EE
350 CLS:T1$=CHR$(132)+CHR$(135)+CHR >GD
$(136)+CHR$(119)+CHR$(118)+CHR$(133
)+CHR$(131)+CHR$(137)+CHR$(134)+CHR
$(117)
360 TI1$=CHR$(125)+CHR$(128)+CHR$(1 >PF
29)+CHR$(112)+" "+CHR$(126)+CHR$(12
4)+CHR$(130)+CHR$(127)+CHR$(110)
370 CLS:WINDOW#1,5,16,22,25:PAPER#1 >XA
,8:CLS#1:PEN#1,1
380 PEN#1,0:PRINT#1,CHR$(212)TAB(12 >NP
)CHR$(213);:PRINT#1:PRINT#1:PRINT#1
,CHR$(215)TAB(12)CHR$(214);
390 Y=23:Y1=24                      >UH
400 WHILE INKEY$=""                 >NE
410 WHILE INKEY$<>"":WEND           >VH
420 PEN C:LOCATE 6,Y:PRINT IV$T1$IV >XV
$:PEN 8:LOCATE 6,Y1:PRINT 1V$T11$1V
$
430 C=C+1:B=8+1:1=I+1               >PW
440 1F C>13 DR 8>13 OR 1>13 THEN C= >TJ
1:B=2:1=3 ELSE 1F C=5 OR B=5 OR 1=5
 THEN C=C+1:8=B+2:1=I+1
450 1F PASS=0 THEN FOR X=1 TO 18:LO >LM
CATE 1,25+X:PRINT CHR$(11):FOR Z=1
TO 150:NEXT Z,X
460 1F 1<>8 THEN PEN 8:LOCATE 2,24: >GX
PRINT MID$(Z$,1,18);:Z$=M1D$(Z$,2):
1F LEN(Z$)<19 THEN Z$=Z$+X$
470 BORDER 1                        >EH
480 FOR  H=1 TO 36:MOVE 0,398-H*10: >CM
DRAW (H+1)*60,40,1:NEXT H
490 PASS=1:Y=5:Y1=6:WEND            >VG
500 '                               >RF
510 MODE 1                          >HE
520 SYMBOL AFTER 32                 >NE
530 D1M CARTE$(24),CAR$(24),CAR1$(2 >AA
4),CH(24):REC=25:ES=1
540 MODE 1:1NK 0,0:1NK 1,26:1NK 2,4 >XR
:1NK 3,12:BORDER 0:PAPER 2:1V$=CHR$
(24)
550 OUT &BC00,2:OUT &BD00,46:OUT &8 >VF
C00,7:OUT &BD00,30
560 SYMBOL 110,72,72,136,145,162,68 >HE
,72,144
570 SYMBOL 111,56,88,152,24,24,24,5 >EP
6,84
580 SYMBOL 112,48,56,92,148,20,0,1, >CH
7
590 SYMBOL 113,90,60,24,60,60,24,25 >FR
5,255
600 SYMBOL 114,0,0,1,3,5,1,128,224  >AH
610 SYMBOL 115,14,13,249,225,65,34, >ET
5,10
620 SYMBOL 116,36,20,146,202,169,14 >HH
8,76,38
630 SYMBOL 117,4,4,8,8,16,17,34,36  >AT
640 SYMBOL 118,8,17,35,71,135,11,27 >DV
,56
650 SYMBOL 119,138,138,138,10,6,2,1 >FF
93,96
660 SYMBOL 120,189,153,153,153,153, >HD
153,153
670 SYMBOL 121,82,81,80,80,96,64,12 >DA
8,0
680 SYMBOL 122,16,8,132,66,33,16,24 >DK
,12
690 SYMBOL 123,64,64,32,32,16,144,7 >DW
2,8
700 SYMBOL 124,0,0,0,0,0,1,2,2       WU
710 SYMBOL 125,64,64,64,132,132,4,4 >CW
,4
720 SYMBOL 126,36,40,41,40,36,35,39 >EY
,106
730 SYMBOL 127,24,24,153,90,90,153, >GJ
24,219
740 SYMBOL 128,36,20,148,20,36,196, >HQ
100,212
750 SYMBOL 129,4,4,4,66,66,65,64,32 >BN
760 SYMBOL 130,0,0,0,0,0,0,128,128  >AF
770 SYMBOL 131,0,0,0,0,0,0,0,0      >WU
780 SYMBOL 132,31,32,69,65,65,65,64 >EC
,64
790 SYMBOL 133,129,96,224,33,34,2,1 >FH
29,66
800 SYMBOL 134,255,255,126,255,24,2 >HX
4,24,24
810 SYMBOL 135,129,2,7,132,68,64,12 >ER
9,66
820 SYMBOL 136,240,8,164,132,132,13 >FE
2,4,4
830 SYMBOL 137,0;0,0,0,0,0,0,0      >WX
```

```
840 REM                                   >UJ
850 a$=CHR$(131)+CHR$(132)+CHR$(133 >AG
)+CHR$(134)+CHR$(135)+CHR$(136)+CHR
$(137)
860 b$=CHR$(124)+CHR$(125)+CHR$(126 >AP
)+CHR$(127)+CHR$(128)+CHR$(129)+CHR
$(130)
870 c$=CHR$(117)+CHR$(118)+CHR$(119 >AC
)+CHR$(120)+CHR$(121)+CHR$(122)+CHR
$(123)
880 d$=CHR$(110)+CHR$(111)+CHR$(112 >AQ
)+CHR$(113)+CHR$(114)+CHR$(115)+CHR
$(116)
890 REM                                   >VD
900 Y=10:X=2:PAPER 1:PEN 0                >UH
910 FOR X=2 TO 17                         >EF
920 LOCATE X,10:PRINT IV$a$IV$            >YG
930 LOCATE X,11:PRINT IV$b$IV$            >ZB
940 LOCATE X,12:PRINT IV$c$IV$            >ZE
950 LOCATE X,13:PRINT IV$d$IV$            >ZH
960 FOR LX=1 TO 3:LOCATE X-1,Y+LX:P >ZH
RINT IV$" "IV$:NEXT
970 NEXT:PAPER 1:PEN 1 : BORDER 26  >AL
980 LOCATE 1,25:PRINT IV$CHR$(212)I >FA
V$;
990 LOCATE 40,25:PRINT IV$CHR$(213) >GQ
IV$;
1000 FOR T=1 TO 7:LOCATE 1,25+T:PRI >PG
NT CHR$(11);
1010 FOR I=1 TO 150:NEXT I,T          >VQ
1020 LOCATE 1,1:PRINT IV$CHR$(212)I >FB
V$;
1030 LOCATE 40,1:PRINT IV$CHR$(213) >GR
IV$;

1040 PLOT 17,129,1:DRAW 622,129:DRA >WD
W 622,385:DRAW 17,385:DRAW 17,129:P
EN 2
1050 PAPER 0:PEN 3 : AZ$="BLUE":AZ1 >LV
$="CARDS"
1060 X=3:Y=8:B=33                     >LG
1070 FOR S=1 TO 12:SOUND 1,15+B       >XA

1080 LOCATE X+S,Y:PRINT CHR$(32)AZ$ >DT

1090 LOCATE B-S,Y:PRINT AZ1$CHR$(32 >EF
)
1100 SOUND 1,450-S:NEXT               >RG
1110 PEN 2:FOR I=1 TO 6               >PY
1120 LOCATE 15,15-I:PRINT STRING$(1 >HB
2,45)
1130 LOCATE 15,16-I:PRINT STRING$(1 >PQ
2,32):NEXT
1140 T$=".(ENTER)..DESSINS..(T)..TE >YU
XTES.":T=LEN(T$)\2:FOR Z=1 TO LEN(T
$)
1150 PEN 3:LOCATE 20-T+Z,15:PRINT M >PL
ID$(T$,Z,1)
1160 NEXT                             >KK
1170 GOSUB 4490                       >XJ
1180 A$=UPPER$(INKEY$):IF A$="" THE >GC
N 1180
1190 IF A$="T" THEN CHOIX=1 ELSE CH >GC
OIX=0
1200 IF A$<>"T" AND A$<>CHR$(13) TH >FE
EN 1180
1210 PAPER 1:FOR X=1 TO 25            >TB
1220 LOCATE 1,25+X:PRINT CHR$(11)     >AF

1230 FOR Z=1 TO 50:NEXT Z,X           >VD
1240 PAPER 0:CLS:INK 0,0:INK 1,26:I >BG
NK 2,6:INK 3,2:BORDER 0
1250 OUT &BC00,2:OUT &BD00,45 : OUT >XX
 &BC00,7:OUT &BD00,28
1260 '****************************** >YB
**************
1270 '************ VISAGE ''PROFIL' >YC
' CARTE$(1) **
1280 SYMBOL 161,255,128,129,131,135 >NL
,135,132,141
1290 SYMBOL 162,255,0,176,127,158,2 >KR
49,24,142
1300 SYMBOL 163,255,1,1,1,129,225,1 >GM
61,145
1310 SYMBOL 164,144,160,164,156,137 >NQ
,143,136,144
1320 SYMBOL 165,14,14,15,26,25,57,1 >CN
,3
1330 SYMBOL 166,81,49,241,209,81,97 >HW
,193,65
1340 SYMBOL 167,152,143,129,130,129 >NA
,159,225,255
1350 SYMBOL 168,3,129,1,1,0,0,0,255 >BA

1360 SYMBOL 169,65,129,1,1,129,65,3 >FA
3,255
1370 '****************************** >YD
**************
1380 '*********** FLEURS CARTE$(2)  >YE
**************
1390 SYMBOL 170,255,131,132,136,155 >NW
,172,165,164
1400 SYMBOL 171,255,0,152,108,236,9 >KP
8,178,172
1410 SYMBOL 172,255,1,1,1,1,1,1,1   >ZU

1420 SYMBOL 173,191,145,147,141,133 >NL
,136,136,140
1430 SYMBOL 174,68,196,69,58,34,195 >EB
,2,2
1440 SYMBOL 175,1,145,169,197,229,9 >KN
3,165,169
1450 SYMBOL 176,132,133,134,148,140 >NJ
,132,132,255
1460 SYMBOL 177,1,5,2,4,8,28,32,255 >BX

1470 SYMBOL 178,169,207,49,1,1,1,1, >DR
255
1480 '****************************** >YF
*******************
1490 '******* FENETRE ************* >YG
**** CARTE$(3) ****
1500 SYMBOL 179,255,128,135,132,133 >NL
,133,133,133
1510 SYMBOL 180,255,0,255,0,255,250 >JC
,245,233
1520 SYMBOL 181,255,1,225,161,33,33 >GR
,33,33
1530 SYMBOL 182,133,133,133,133,133 >MF
,133,133,133
1540 SYMBOL 183,233,233,235,233,233 >NM
,233,235,233
1550 SYMBOL 184,161,33,33,33,161,33 >GW
,33,33
1560 SYMBOL 185,132,135,132,136,144 >NV
,160,192,255
1570 SYMBOL 186,9,249,8,9,10,12,8,2 >DK
55
1580 SYMBOL 187,33,97,161,17,9,5,3, >DH
255
1590 '****************************** >YH
*******************
1600 '******* VISAGE 'FACE'' ***** >XK
**** CARTE$(4) ****
1610 SYMBOL 188,255,129,134,137,151 >NN
,148,184,184
1620 SYMBOL 189,255,179,77,254,73,1 >LE
78,150,104
1630 SYMBOL 190,255,129,97,81,185,7 >HX
7,13,45
1640 SYMBOL 191,182,177,166,163,176 >NT
,176,144,136
1650 SYMBOL 192,19,133,82,149,19,8, >FG
36,24
1660 SYMBOL 193,205,5,205,85,153,25 >GJ
,17,33
1670 SYMBOL 194,136,132,135,133,132 >NR
,152,224,255
1680 SYMBOL 195,0,92,62,128,96,31,0 >EM
,255
1690 SYMBOL 196,65,65,65,129,129,11 >HC
3,9,255
1700 '****************************** >YA
*******************
1710 '******* MODULE ************** >YB
*** CARTE$(5) *****
1720 SYMBOL 197,255,128,191,162,165 >NP
,170,180,169
1730 SYMBOL 198,255,36,72,144,32,64 >JG
,128,128
1740 SYMBOL 199,255,131,133,137,145 >NA
```

```
,161,193,131
1750 SYMBOL 200,146,164,200,144,160 >NM
,192,128,255
1760 SYMBOL 201,255,128,128,128,128 >NE
,128,128,128
1770 SYMBOL 202,5,9,17,33,65,129,12 >EP
9,65
1780 SYMBOL 203,129,130,132,136,144 >NR
,160,193,255
1790 SYMBOL 204,6,9,16,32,64,128,0, >DT
255
1800 SYMBOL 205,33,17,137,69,35,17, >FB
9,255
1810 '****************************** >YC
*******************
1820 '******* OISEAU ************** >YD
*** CARTE$(6) *****
1830 SYMBOL 206,255,128,128,128,128 >NB
,131,128,128
1840 SYMBOL 207,255,0,112,136,164,1 >JU
32,68,68
1850 SYMBOL 208,255,1,1,1,1,1,1,1   >ZC

1860 SYMBOL 209,128,128,128,129,129 >NT
,130,130,130
1870 SYMBOL 210,68,132,132,100,84,6 >HC
6,69,34
1880 SYMBOL 211,1,1,1,1,1,1,1,129   >ZZ

1890 SYMBOL 212,131,129,128,128,128 >NF
,128,128,255
1900 SYMBOL 213,61,128,249,39,36,68 >JD
,132,255
1910 SYMBOL 214,65,161,81,105,21,11 >GP
,1,255
1920 '****************************** >YE
*******************
1930 '******* CIBLE *************** >YF
** CARTE$(7) *****
1940 SYMBOL 215,255,128,128,128,143 >NB
,140,138,137
1950 SYMBOL 216,129,129,129,129,129 >GE
,0,0,0
1960 SYMBOL 217,255,1,1,1,241,49,81 >EA
,145
1970 SYMBOL 218,248,0,0,0,0,0,0,248 >8D

1980 SYMBOL 219,255,255,255,255,255 >N8
,255,255,255
1990 SYMBOL 220,31,0,0,0,0,0,0,31   >ZP

2000 SYMBOL 221,137,138,140,143,128 >NK
,128,128,255
2010 SYMBOL 222,0,0,0,129,129,129,1 >GN
29,129
2020 SYMBOL 223,145,81,49,241,1,1,1 >EJ
,255
2030 '****************************** >XH
*******************
2040 '******* DAMIER ************** >XJ
*** CARTE$(8) *****
2050 SYMBOL 224,255,240,240,240,143 >MG
,143,143,143
2060 SYMBOL 225,255,240,240,240,15, >JV
15,15,15
2070 SYMBOL 226,255,241,241,241,15, >JA
15,15,15
2080 SYMBOL 227,240,240,240,240,143 >MG
,143,143,143
2090 SYMBOL 228,240,240,240,240,15, >JV
15,15,15
2100 SYMBOL 229,241,241,241,241,15, >JR
15,15,15
2110 SYMBOL 230,240,240,240,240,143 >MY
,143,143,255
2120 SYMBOL 231,240,240,240,240,15. >JG
15,15,15
2130 SYMBOL 232,241,241,241,241,15, >KL
15,15,255
2140 '****************************** >XK
*******************
2150 '**************** COURONNE *** >YA
***** CARTE$(9) ***
2160 SYMBOL 233,0,0,0,0,0,0,0,4     >XW
2170 SYMBOL 234,0,8,8,62,8,8,8,8    >YH
2180 SYMBOL 235,0,0,0,0,0,0,0,16    >YG

2190 SYMBOL 236,6,3,0,0,0,5,9,17    >YK
2200 SYMBOL 237,8,235,62,28,28,73,2 >FG
47,85
2210 SYMBOL 238,48,224,0,0,0,80,200 >DV
,68
2220 SYMBOL 239,17,51,6,3,1,1,0,0   >ZE
2230 SYMBOL 240,42,255,170,255,0,25 >HJ
5,255,0
2240 SYMBOL 241,68,230,176,224,64,1 >GX
28,0,0
2250 SYMBOL 248,128,64,32,16,8,4,2, >CC
1
2260 SYMBOL 249,129,66,36,24,24,60, >HH
126,255
2270 SYMBOL 250,1,2,4,8,16,32,64,12 >BF
8
2280 '****************************** >YE
*******************
2290 '************ SABLIER ******** >YF
***** CARTE$(10) **
2300 SYMBOL 242,1,2,4,8,16,32,64,12 >BA
8
2310 SYMBOL 243,255,126,60,24,24,36 >HX
,66,129
2320 SYMBOL 244,128,64,32,16,8,4,2, >BE
1
2330 SYMBOL 245,129,67,39,31,31,39, >GY
67,129
2340 SYMBOL 246,129,195,231,255,255 >NK
,231,195,129
2350 SYMBOL 247,129,194,228,248,248 >NC
,228,194,129
2360 '****************************** >YD
*******************
2370 '***********  DEMON  ********* >YE
***** CARTE$(11) **
2380 SYMBOL 251,48,192,0,3,4,0,0,0  >AT
2390 SYMBOL 252,24,5,2,132,40,40,40 >DQ
,40
2400 SYMBOL 253,128,0,0,0,0,0,0,0   >ZK
2410 SYMBOL 254,5,5,4,2,1,1,3,12    >YX
2420 SYMBOL 255,149,168,16,0,5,0,71 >DH
,32
2430 SYMBOL 100,74,164,72,8,16,16,3 >EY
2,64
2440 SYMBOL 101,0,0,0,4,6,5,4,5     >XM
2450 SYMBOL 102,0,0,15,16,32,64,208 >DU
,72
2460 SYMBOL 103,0,0,128,66,38,26,82 >EA
,138
2470 '****************************** >YF
*******************
2480 '*********** HOMME ******** CA >YG
RTES$(12) *********
2490 SYMBOL 90,0,0,0,0,0,0,0,56     >XL
2500 SYMBOL 91,124,130,170,130,146, >JH
68,56,16
2510 SYMBOL 92,56,29,29,15,14,4,0,0 >BQ

2520 SYMBOL 93,255,255,255,126,124, >LG
60,124,254
2530 SYMBOL 94,0,128,192,224,224,11 >KP
2,112,112
2540 SYMBOL 96,1,1,1,1,1,3,7,15     >XZ
2550 SYMBOL 97,239,199,199,199,199, >NB
199,199,199
2560 SYMBOL 98,80,0,0,0,0,0,0,128   >ZJ

2570 '****************************** >YG
*******************
2580 PLOT 1,1,3:DRAW 1,398:DRAW 590 >RL
,398:DRAW 590,1
2590 G=2:D=6:H=2:B=6:FOR 1=1 TO 6:G >TY
OSUB 4750:NEXT
2600 G=2:D=6:H=8:B=12:FOR 1=1 TO 6: >UL
GOSUB 4750:NEXT
2610 B=2:D=6:H=14:B=18:FOR I=1 TO 6 >VK
:GOSUB 4750:NEXT
2620 G=2:D=6:H=20:B=24:FOR 1=1 TO 6 >VE
:GOSUB 4750:NEXT
2630 PEN 3:T1T$="BLUE CARDS":FOR I= >YF
1 TO LEN(T1T$):LOCATE 40,6+1:PRINT
MID$(T1T$,I,1):NEXT
2640 PEN 1:B=0:PRINT CHR$(22)CHR$(1 >EX
```



```
);
2650 FOR L=1 TO 6                   >CK
2660 LOCATE 3+B,1 : PRINT L : B=B+6 >ZA

2670 NEXT                           >LG
2680 PRINT CHR$(22)CHR$(0);         >VE
2690 B=0:FOR L=1 TO 6:LOCATE 3+B,7  >AD
:PRINT 6+L:B=B+6 :NEXT
2700 B=0:FOR L=1 TO 6:LOCATE 3+B,13 >BD
:PRINT 12+L:B=B+6:NEXT
2710 B=0:FOR L=1 TO 6:LOCATE 3+B,19 >CJ
:PRINT 18+L:B=B+6:NEXT
2720 WINDOW#2,1,37,25,25:PAPER#2,1: >TQ
CLS#2:PEN#2,3
2730 CAR$(1)=CHR$(161)+CHR$(162)+CH >JC
R$(163)
2740 CARTES$(1)=CHR$(164)+CHR$(165)+ >LG
CHR$(166)
2750 CAR1$(1)=CHR$(167)+CHR$(168)+C >KQ
HR$(169)
2760 CAR$(2)=CHR$(170)+CHR$(171)+CH >JG
R$(172)
2770 CARTES$(2)=CHR$(173)+CHR$(174)+ >LL
CHR$(175)
2780 CAR1$(2)=CHR$(176)+CHR$(177)+C >KV
HR$(178)
2790 CAR$(3)=CHR$(179)+CHR$(180)+CH >JW
R$(181)
2800 CARTES$(3)=CHR$(182)+CHR$(183)+ >LF
CHR$(184)
2810 CAR1$(3)=CHR$(185)+CHR$(186)+C >KP
HR$(187)
2820 CAR$(4)=CHR$(188)+CHR$(189)+CH >JA
R$(190)
2830 CARTES$(4)=CHR$(191)+CHR$(192)+ >LK
CHR$(193)
2840 CAR1$(4)=CHR$(194)+CHR$(195)+C >KU
HR$(196)
2850 CAR$(5)=CHR$(197)+CHR$(198)+CH >JP
R$(199)
2860 CARTES$(5)=CHR$(200)+CHR$(201)+ >LK
CHR$(202)
2870 CAR1$(5)=CHR$(203)+CHR$(204)+C >JC
HR$(205)
2880 CAR$(6)=CHR$(206)+CHR$(207)+CH >JP
R$(208)
2890 CARTES$(6)=CHR$(209)+CHR$(210)+ >LZ
CHR$(211)
2900 CAR1$(6)=CHR$(212)+CHR$(213)+C >JX
HR$(214)
2910 CAR$(7)=CHR$(215)+CHR$(216)+CH >JJ
R$(217)
2920 CARTES$(7)=CHR$(218)+CHR$(219)+ >LD
CHR$(220)
2930 CAR1$(7)=CHR$(221)+CHR$(222)+C >JB
HR$(223)
2940 CAR$(8)=CHR$(224)+CHR$(225)+CH >JN
R$(226)
2950 CARTES$(8)=CHR$(227)+CHR$(228)+ >LT
CHR$(229)
2960 CAR1$(8)=CHR$(230)+CHR$(231)+C >JF
HR$(232)
2970 CAR$(9)=CHR$(233)+CHR$(234)+CH >JT
R$(235)
2980 CARTES$(9)=CHR$(236)+CHR$(237)+ >LX
CHR$(238)
2990 CAR1$(9)=CHR$(239)+CHR$(240)+C >KL
HR$(241)
3000 CAR$(10)=CHR$(242)+CHR$(243)+C >JR
HR$(244)
3010 CARTES$(10)=CHR$(245)+CHR$(246) >MP
+CHR$(247)
3020 CAR1$(10)=CHR$(248)+CHR$(249)+ >KW
CHR$(250)
3030 CAR$(11)=CHR$(101)+CHR$(102)+C >JB
HR$(103)
3040 CARTES$(11)=CHR$(254)+CHR$(255) >MF
+CHR$(100)
3050 CAR1$(11)=CHR$(251)+CHR$(252)+ >KQ
CHR$(253)
3060 CAR$(12)=CHR$(90)+CHR$(91)+CHR >HQ
$(137)
3070 CARTES$(12)=CHR$(92)+CHR$(93)+C >JZ
HR$(94)
3080 CAR1$(12)=CHR$(96)+CHR$(97)+CH >HN
R$(98)
3090 IF CHOIX=1 THEN FOR Z=1 TO 24: >RU
CAR$(Z)=STRING$(3,32):CAR1$(Z)=STR1
NG$(3,32):NEXT:
3100 IF CHOIX=1 THEN CARTES$(1)="FIN >PO
":CARTES$(2)="RAT":CARTES$(3)="SOU":C
ARTES$(4)="MOU":CARTES$(5)="BON":CART
ES$(6)="MAL":CARTES$(7)="GAI":CARTES$(
8)="POU":CARTES$(9)="SON":CARTES$(10)
="TIR":CARTES$(11)="SAC":CARTES$(12)=
"MAC"
3110 cartes$(24)=cartes$(12):car$(24) >KV
=car$(12):car1$(24)=car1$(12)
3120 I=1:FOR M=13 TO 24:car$(M)=car >XU
$(I):car1$(M)=car1$(I):CARTES$(M)=CA
RTES$(I):I=I+1:NEXT
3130 REM                            >ZJ
3140 REM MELAGE LES CARTES          >VM
3150                                >YB
3160 CLS#2:PEN#2,2                  >MX
3170 LOCATE#2,4,2:PRINT#2,"UN MOMEN >LP
T, JE MELANGE LES CARTES."
3180 FOR S=1 TO 24                  >LY
3190 RANDOMIZE TIME                 >PP
3200 CH(S)=INT(RND*24)+1            >TP
3210 L=1                            >VF
3220 FOR R=1 TO S                   >FJ
3230 IF CH(S)=CH(S-L) THEN 3190     >XE
3240 L=L+1                          >KG
3250 NEXT R,S                       >MG
3260  PRINT CHR$(22)CHR$(0);        >VX
3270 CLS#2:PEN#2,0                  >MX
3280 PEN#2,2:LOCATE#2,2,1:PRINT#2," >PQ
ESSAI":STRING$(-(ES>1),"S");ES;")+(
";:PEN#2,0:PRINT#2,"CARTE A RETOURN
ER :";
3290 PEN#2,2:INPUT#2,"",N$          >UC
3300 N=VAL(N$)                      >TK
3310 IF N<1 OR N>24 THEN GOSUB 4710 >HB
 : GOTO 3270
3320 N=VAL(N$): IF N<1 OR N>24 THEN >XN
 GOSUB 4710 : GOTO 3270
3330                                >YB
3340 IF N=1 THEN x=3:y=4            >RJ
3350 IF N=2 THEN x=9:y=4            >RT
3360 IF N=3 THEN x=15:y=4           >TM
3370 IF N=4 THEN x=21:y=4           >TL
3380 IF N=5 THEN x=27:y=4           >TV
3390 IF N=6 THEN x=33:y=4           >TU
3400 IF N=7 THEN x=3:y=10           >TE
3410 IF N=8 THEN x=9:y=10           >TN
3420 IF N=9 THEN x=15:y=10          >UJ
3430 IF N=10 THEN x=21:y=10         >UC
3440 IF N=11 THEN x=27:y=10         >UL
3450 IF N=12 THEN x=33:y=10         >UK
3460 IF N=13 THEN x=3:y=16          >UJ
3470 IF N=14 THEN x=9:y=16          >UT
3480 IF N=15 THEN x=15:y=16         >UY
3490 IF N=16 THEN x=21:y=16         >UX
3500 IF N=17 THEN x=27:y=16         >UW
3510 IF N=18 THEN x=33:y=16         >UV
3520 IF N=19 THEN x=3:y=22          >UJ
3530 IF N=20 THEN x=9:y=22          >UH
3540 IF N=21 THEN x=15:y=22         >UN
3550 IF N=22 THEN x=21:y=22         >UM
3560 IF N=23 THEN x=27:y=22         >UW
3570 IF N=24 THEN x=33:y=22         >UV
3580 C=CH(N)                        >BH
3590 IF CARTES$(C)="" THEN GOSUB 471 >MT
0 : GOTO 3270
3600 IF N=NN OR NN=N THEN GOSUB 471 >ME
0 : GOTO 3270
3610 X1=X:Y1=Y                      >BE
3620 REM                            >AC
3630 REM ******* AFFICHAGE DES CART >LJ
ES *******
3640 REM                            >AE
3650 PEN 1                          >GD
3660 LOCATE x,y-1:PRINT IV$CAR$(C)I >FY
V$
3670 LOCATE x,y:PRINT IV$CARTES$(C)I >GG
V$
3680 LOCATE x,y+1:PRINT IV$CAR1$(C) >GJ
IV$
3690 REM                            >AK
3700 REM ******* ENTRER LES CARTES  >GZ
```



```
*******
3710 REM                                >AC
3720 CLS#2:PEN#2,0                      >MX
3730 PEN#2,3:LOCATE#2,2,1:PRINT#2," >EJ
ESSAI";STRING$(-(ES>1),"S");ES;")*(
";:PEN#2,0:PRINT#2,"CARTE A RETOURN
ER :";:PEN #2,3
3740 INPUT#2,"",NN$                     >NB
3750 NN=VAL(NN$)                        >LK
3760 IF NN<1 OR NN>24 THEN GOSUB 47 >NZ
10:GOTO 3700
3770 NN=VAL(NN$): IF NN<1 OR NN>24  >CZ
THEN GOSUB 4710:GOTO 3700
3780                                    >ZA
3790 IF NN=1 THEN x=3:y=4               >TV
3800 IF NN=2 THEN x=9:y=4               >TU
3810 IF NN=3 THEN x=15:y=4              >UP
3820 IF NN=4 THEN x=21:y=4              >UN
3830 IF NN=5 THEN x=27:y=4              >UX
3840 IF NN=6 THEN x=33:y=4              >UW
3850 IF NN=7 THEN x=3:y=10              >UR
3860 IF NN=8 THEN x=9:y=10              >UA
3870 IF NN=9 THEN x=15:y=10             >VX
3880 IF NN=10 THEN x=21:y=10            >VR
3890 IF NN=11 THEN x=27:y=10            >VA
3900 IF NN=12 THEN x=33:y=10            >VP
3910 IF NN=13 THEN x=3:y=16             >VM
3920 IF NN=14 THEN x=9:y=16             >VW
3930 IF NN=15 THEN x=15:y=16            >VC
3940 IF NN=16 THEN x=21:y=16            >VB
3950 IF NN=17 THEN x=27:y=16            >WB
3960 IF NN=18 THEN x=33:y=16            >WA
3970 IF NN=19 THEN x=3:y=22             >VX
3980 IF NN=20 THEN x=9:y=22             >VN
3990 IF NN=21 THEN x=15:y=22            >VC
4000 IF NN=22 THEN x=21:y=22            >VG
4010 IF NN=23 THEN x=27:y=22            >VQ
4020 IF NN=24 THEN x=33:y=22            >VP
4030                                    >XK
4040 CC=CH(NN)                          >VB
4050 IF N=NN OR NN=N THEN GOSUB 471 >ML
0:GOTO 4170
4060 IF CARTE$(CC)="" THEN GOSUB 47 >NK
10 :GOTO 3700
4070 REM                                >AC
4080 REM ******* AFFICHER  2EME CAR >KK
TE *********
4090 REM                                >AE
4100 PEN 1                              >FE
4110 LOCATE x,y-1:PRINT IV$CAR$(CC) >GU
IV$
4120 LOCATE x,y:PRINT IV$CARTE$(CC) >HC
IV$
4130 LOCATE x,y+1:PRINT IV$CAR1$(CC >HF
)IV$
4140 FOR T=1 TO 1000:NEXT               >TV
4150 IF CARTE$(C)=CARTE$(CC) THEN C >ZD
ARTE$(C)="":CARTE$(CC)="":SC=SC+1:E
S=ES+1:GOSUB 4570 : C=0:CC=0:N=0:NN
=0:IF SC=12 THEN 4300 ELSE 3270
4160 REM                                >AC
4170 REM ************ REFERMER FENE >PW
TRE ***********
4180 REM                                >AE
4190 PEN 3                              >GF
4200 LOCATE x,y-1:PRINT STRING$(3,1 >HV
43);
4210 LOCATE x,y:PRINT STRING$(3,143 >FE
);
4220 LOCATE x,y+1:PRINT STRING$(3,1 >HV
43);
4230 LOCATE x1,y1-1:PRINT STRING$(3 >KY
,143);
4240 LOCATE x1,y1:PRINT STRING$(3,1 >HD
43);
4250 LOCATE x1,y1+1:PRINT STRING$(3 >KY
,143);
4260 PEN 1:GOSUB 4670                   >PJ
4270 ES=ES+1:IF SC=12 THEN 4300         >YB
4280 N=0:NN=0:C=0:CC=0:GOTO 3270        >AY

4290 REM                                >AG
4300 REM ********** FENETRE SCORE F >RL
INAL ************
4310 REM                                >ZK
4320 WINDOW#3,4,34,5,13:PAPER#3,1:C >RR
LS#3:PEN#3,3
4330 a$=CHR$(150)+STRING$(29,154)+C >KX
HR$(156)
4340 LOCATE #3,1,1:PRINT#3,a$;          >YJ
4350 FOR T=1 TO 7                       >DH
4360 LOCATE#1,1,1+T:PRINT#3,CHR$(14 >ZJ
9)TAB(31)CHR$(149);
4370 NEXT                               >LF
4380 a$=CHR$(147)+STRING$(29,154)+C >KF
HR$(153)
4390 LOCATE#3,1,9:PRINT#3,a$;           >YD
4400 IF REC>ES THEN REC=ES              >VN
4410 LOCATE#3,11,3:PRINT#3,"RESULTA >KQ
TS:";
4420 LOCATE #3,4,5:PRINT#3,"RECORD  >EY
:";REC;" ESSAIS.. :";ES
4430 LOCATE #3,4,7:PRINT#3,"UNE AUT >JB
RE PARTIE (O/N) "CHR$(143)
4440 R$=UPPER$(INKEY$):IF R$="" THE >HK
N 4440
4450 IF R$="O" THEN CLS:SC=0:ES=1:G >JM
OTO 540
4460 IF R$="N" THEN CALL 0              >RV
4470 IF R$<>"O" OR R$<>"N" THEN 444 >AE
0
4480 REM                                >AH
4490 REM ********** MOTIF SONORE I >ZV
NTRO ******************
4500 REM                                >AA
4510 SOUND 1,239,150,5,2:SOUND 2,23 >ND
9,50,5,2:SOUND 2,190,100,5,2:SOUND
4,239,100,5,2:SOUND 4,159,50,5,2
4520 SOUND 1,239,100.5,2:SOUND 2,17 >HE
9,100,5,2:SOUND 4,142,100,5,2
4530 SOUND 1,239,100,5,2:SOUND 2,19 >GT
0,100,5,2:SOUND 4,95,100,5,2
4540 SOUND 1,190,100,5,2:SOUND 2,11 >GJ
9,100,5,2:SOUND 4,80,100,5,2
4550 RETURN                             >FH
4560 REM                                >AG
4570 REM ********** MOTIF SONORE TR >AG
OUVE ******************
4580 REM                                >AJ
4590 ENV 2,10,1,1,7,-1,5,1,0,20         >WU
4600 ENT 1,30,1,1,1,-30,5,30,1,1,1, >LT
-30,5,30,1,1
4610 ENT 4,10,-1,1,30,1,1,10,6,2        >XM
4620 FOR SON=1 TO 2                     >MV
4630 SOUND 1,119,100,4,2,1:SOUND 2, >NM
95,100,4,2,1:SOUND 4,80,100,4,2,1

4640 NEXT                               >LF
4650 RETURN                             >FJ
4660 REM                                >AH
4670 REM ****************** REPONS >AV
E FAUSSE ****************
4680 REM                                >AK
4690 SOUND 1,110,10,5:SOUND 1,100,1 >YU
0,5:SOUND 1,90,10,5:SOUND 1,180,10,
5:SOUND 1,70,10,5:SOUND 1,60,10,5:S
OUND 1,50,10,5:SOUND 1,40,10,5
4700 RETURN                             >FE
4710 REM                                >AD
4720 REM *************          ERRE >LW
UR        ***************
4730 SOUND 1,10,10,5:SOUND 1,20,10, >VU
5:SOUND 1,170,10,5
4740 RETURN                             >FJ
4750 LI$=CHR$(150)+STRING$(3,154)+C >LA
HR$(156)
4760 LI1$=CHR$(147)+STRING$(3,154)+ >LF
CHR$(153)
4770 REM                                >AK
4780 REM ************* FENETRES PAG >ZQ
E JEU ******************
4790 REM                                >BB
4800 WINDOW#1,G,D,H,B:PAPER#1,3:CLS >PT
#1:PEN#1,0
4810 PRINT#1,LI$CHR$(149)TAB(5)CHR$ >DF
(149)CHR$(149)TAB(5)CHR$(149)CHR$(1
49)TAB(5)CHR$(149)LI1$;
4820 G=D+2:D=G+4                        >GD
4830 RETURN                             >FJ
4840 REM ************* FIN DU LIST >ZN
ING ********************
```



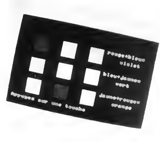


COULMELO

JEU DES MELANGES DE COULEURS

Jean REINGOT

Si vous savez ce que vous obtenez en mélangeant du rouge avec du bleu, ou du bleu avec du jaune ou encore du jaune avec du rouge : c'est que le mélange des couleurs n'a plus aucun secret pour vous.
Pourtant, ce qui vous est proposé ici n'est pas aussi simple et vous trouverez certainement qu'à partir du niveau cinq, c'est de moins en moins évident.
L'auteur a jugé bon d'avertir les utilisateurs que la vision des couleurs est assez différente selon les individus. Il peut donc être utile dans certains cas de modifier les couleurs de base (bleu et jaune).




```
10 '******************************** >LA
****
20 '***          COULMELO            >LB
 ***
30 '***        Jean Reingot          >LC
 ***
40 '***    Version 464.664.6128      >LD
 ***
50 '***        Novembre  1987        >LE
 ***
60 '***    DALTONIENS S'ABSTENIR     >LF
 ***
70 '******************************** >LG
****
80 '***      INITIALISATIONS         >LH
 ***
90 '******************************** >LJ
****
100 CLS                              >TF
110 WINDOW#1,2,28,17,24              >RN
120 WINDOW#2,30,39,21,24             >RR
130 WINDOW#3,31,37,18,18             >RC
140 t=0:sc=0                         >ED
150 ENV 1,1,15,6,15,-1,8             >QV
160 ENV 2,1,15,5,5,-1,10,10,-1,5     >XR
170 DIM f$(2,48),11$(2,5),12$(2,5),  >QU
13$(2,5),p$(2,5)
180 INK 0,0:BORDER 0:PAPER 0         >WB
190 PRINT CHR$(22)+CHR$(1)           >UL
200 INK 1,6:INK 2,2:INK 3,24         >UP
210 FOR i=1 TO 3                     >VC
220 c$(i)=CHR$(15)+CHR$(i)           >UH
230 p$(1,i)=c$(i)+CHR$(143)          >UQ
240 p$(2,i)=c$(i)+CHR$(207)          >UU
250 NEXT                             >EC
260 FOR i=1 TO 2:FOR j=1 TO 3        >UW
270 11$(i,j)=p$(i,j)+p$(i,j)         >VZ
280 12$(i,j)=11$(i,j)+11$(i,j)       >XN
290 13$(i,j)=11$(i,j)+p$(i,j)        >WA
300 NEXT:NEXT                        >BA
310 FOR i=1 TO 2                     >VC
320 p$(i,4)=p$(i,1)                  >MC
330 p$(i,5)=p$(i,2)                  >MF
340 11$(i,4)=11$(i,1)                >NN
350 11$(i,5)=11$(i,2)                >NR
360 12$(i,4)=12$(i,1)                >NT
370 12$(i,5)=12$(i,2)                >NW
380 13$(i,4)=13$(i,1)                >NX
390 13$(i,5)=13$(i,2)                >NA
400 NEXT                             >DK
410 GOSUB 1760:GOSUB 2930            >TJ
420 CLS:GOSUB 2860                   >ML

430 '******************************** >RH
****
440 '***             MENU            >RJ
 ***
450 '******************************** >RK
****
460 LOCATE 4,4:PRINT"Il faut trouve >NB
r les deux plaques"
470 LOCATE 4,5:PRINT"qui en s'addit >MT
ionnant donneront"
480 LOCATE 4,6:PRINT"le modele."    >DH
490 LOCATE 4,9:PRINT"Il suffit de t >FL
aper la lettre"
500 LOCATE 4,10:PRINT"de la plaque  >NT
choisie."
510 PEN 3:LOCATE 10,13:PRINT "Nivea >WT
u   1  Facile"
520 LOCATE 10,14:PRINT "Niveau   2  >CD
 Plus difficile"
530 LOCATE 10,15:PRINT "Niveau   3  >EC
 Assez difficile"
540 LOCATE 10,16:PRINT "Niveau   4  >VD
 Difficile"
550 LOCATE 10,17:PRINT "Niveau   5  >KD
 Dur"
560 LOCATE 10,18:PRINT "Niveau   6  >CG
 Pour champions"
570 LOCATE 10,19:PRINT "Niveau   7  >WR
 Casse-tete"
580 LOCATE 10,20:PRINT "Niveau   8  >TD
 Super-as"
590 PEN 2:LOCATE 12,22:PRINT "Votre >XF
 choix <1 a 8>
600 r$=INKEY$:IF r$="" THEN 600     >XF
610 r=VAL(r$):IF r<1 OR r>8 THEN PR >YK
INT CHR$(7):GOTO 600
620 CLS:ON r GOSUB 670,890,1110,132 >YV
0,1540,1760,1980,2200
630 GOSUB 2860:GOSUB 2870:GOSUB 242 >QC
0:GOSUB 2460
640 '******************************** >TA
****
650 '***      FIGURES NIVEAU 1      >TB
```



```
***
660 '**************************** >TC
****
670 FOR i=1 TO 2                    >WB
680 FOR j=1 TO 4:f$(i,j)=12$(i,1):N >EE
EXT
690 FOR j=5 TO 8:f$(i,j)=12$(i,2):N >EQ
EXT
700 FOR j=9 TO 12:f$(i,j)=12$(i,3): >FT
NEXT
710 FOR j=13 TO 14:f$(i,j)=12$(i,1) >GY
:NEXT
720 FOR j=15 TO 18:f$(i,j)=12$(i,2) >GG
:NEXT
730 FOR j=19 TO 22:f$(i,j)=12$(i,3) >GH
:NEXT
740 FOR j=23 TO 24:f$(i,j)=12$(i,1) >GD
:NEXT
750 FOR j=25 TO 28:f$(i,j)=11$(i,1) >RN
+11$(i,2):NEXT
760 FOR j=29 TO 32:f$(i,j)=11$(i,2) >RQ
+11$(i,3):NEXT
770 FOR j=33 TO 36:f$(i,j)=11$(i,3) >RP
+11$(i,1):NEXT
780 FOR j=37 TO 38:f$(i,j)=11$(i,1) >RW
+11$(i,2):NEXT
790 FOR j=39 TO 40:f$(i,j)=11$(i,2) >RR
+11$(i,1):NEXT
800 FOR j=41 TO 42:f$(i,j)=11$(i,2) >RE
+11$(i,3):NEXT
810 FOR j=43 TO 44:f$(i,j)=11$(i,3) >RK
+11$(i,2):NEXT
820 FOR j=45 TO 46:f$(i,j)=11$(i,3) >RP
+11$(i,1):NEXT
830 FOR j=47 TO 48:f$(i,j)=11$(i,1) >RV
+11$(i,3):NEXT
840 NEXT                            >EH
850 RETURN                          >ZJ
860 '**************************** >TE
****
870 '***     FIGURES NIVEAU 2       >TF
***
880 '**************************** >TG
****
890 FOR i=1 TO 2:FOR j=0 TO 2       >UD
900 F$(i,1+j*4)=11$(i,j+1)+11$(i,j+ >CC
2)
910 F$(i,2+j*4)=11$(i,j+1)+11$(i,j+ >CE
2)
920 F$(i,3+j*4)=11$(i,j+2)+11$(i,j+ >CJ
3)
930 F$(i,4+j*4)=11$(i,j+2)+11$(i,j+ >CL
3)
940 F$(i,13+j*4)=11$(i,j+1)+11$(i,j >DV
+2)
950 F$(i,14+j*4)=11$(i,j+1)+11$(i,j >DX
+2)
960 F$(i,15+j*4)=11$(i,j+3)+11$(i,j >DA
+1)
970 F$(i,16+j*4)=11$(i,j+3)+11$(i,j >DC
+1)
980 F$(i,25+j*4)=11$(i,j+1)+11$(i,j >DC
+2)
990 F$(i,26+j*4)=11$(i,j+1)+11$(i,j >DE
+2)
1000 F$(i,27+j*4)=11$(i,j+1)+11$(i, >EY
j+3)
1010 F$(i,28+j*4)=11$(i,j+1)+11$(i, >EA
j+3)
1020 F$(i,37+j*4)=12$(i,j+1)        >VE
1030 F$(i,38+j*4)=12$(i,j+1)        >VG
1040 F$(i,39+j*4)=11$(i,j+2)+11$(i, >EG
j+3)
1050 F$(i,40+j*4)=11$(i,j+2)+11$(i, >EZ
j+3)
1060 NEXT:NEXT                      >HF
1070 RETURN                         >FB
1080 '**************************** >YB
****
1090 '***     FIGURES NIVEAU 3      >YC
 **
1100 '**************************** >XE
****
1110 FOR i=1 TO 2                   >BC
1120 FOR j=1 TO 4 STEP 3:f$(i,j)=12 >MF
$(i,2):NEXT
1130 FOR j=5 TO 8 STEP 3:f$(i,j)=12 >MP
$(i,1):NEXT
1140 FOR j=9 TO 12 STEP 3:f$(i,j)=1 >NJ
2$(i,3):NEXT
1150 FOR j=2 TO 3:f$(i,j)=12$(i,1): >FD
NEXT
1160 FOR j=6 TO 7:f$(i,j)=12$(i,3): >FQ
NEXT
1170 FOR j=10 TO 11:f$(i,j)=12$(i,2 >HC
):NEXT
1180 FOR j=13 TO 16:f$(i,j)=p$(i,2) >AR
+11$(i,1)+p$(i,2):NEXT
1190 FOR j=17 TO 20:f$(i,j)=p$(i,1) >AR
+11$(i,3)+p$(i,1):NEXT
1200 FOR j=21 TO 24:f$(i,j)=p$(i,3) >AK
+11$(i,2)+p$(i,3):NEXT
1210 FOR j=25 TO 34 STEP 3:f$(i,j)= >PY
12$(i,1):NEXT
1220 FOR j=26 TO 35 STEP 3:f$(i,j)= >PC
12$(i,2):NEXT
1230 FOR j=27 TO 36 STEP 3:f$(i,j)= >PG
12$(i,3):NEXT
1240 FOR j=37 TO 40:f$(i,j)=p$(i,1) >JE
+p$(i,2)+p$(i,3)+p$(i,1):NEXT
1250 FOR j=41 TO 44:f$(i,j)=p$(i,2) >JF
+p$(i,3)+p$(i,1)+p$(i,2):NEXT
1260 FOR j=45 TO 48:f$(i,j)=p$(i,3) >JR
+p$(i,1)+p$(i,2)+p$(i,3):NEXT
1270 NEXT                           >LB
1280 RETURN                         >FE
1290 '**************************** >YE
****
1300 '***     FIGURES NIVEAU 4      >XG
 ***
1310 '**************************** >XH
****
1320 FOR i=1 TO 2:FOR j=0 TO 2      >VK
1330 f$(i,1+j*4)=11$(i,j+1)+p$(i,j+ >NY
2)+p$(i,j+3)
1340 f$(i,2+j*4)=11$(i,j+1)+p$(i,j+ >NA
2)+p$(i,j+3)
1350 f$(i,3+j*4)=13$(i,j+2)+p$(i,j+ >CL
3)
1360 f$(i,4+j*4)=12$(i,j+3)         >UJ
1370 f$(i,13+j*4)=12$(i,j+1)        >VG
1380 f$(i,14+j*4)=p$(i,j+1)+13$(i,j >DZ
+2)
1390 f$(i,15+j*4)=p$(i,j+1)+p$(i,j+ >PF
2)+11$(i,j+3)
1400 f$(i,16+j*4)=p$(i,j+1)+p$(i,j+ >PY
2)+11$(i,j+3)
1410 f$(i,25+j*4)=13$(i,j+1)+p$(i,j >DV
+2)
1420 f$(i,26+j*4)=p$(i,j+1)+11$(i,j >PB
+2)+p$(i,j+3)
1430 f$(i,27+j*4)=p$(i,j+1)+11$(i,j >PD
+2)+p$(i,j+3)
1440 f$(i,28+j*4)=p$(i,j+2)+13$(i,j >DD
+3)
1450 f$(i,37+j*4)=p$(i,j+1)+13$(i,j >DC
+2)
1460 f$(i,38+j*4)=p$(i,j+2)+11$(i,j >PK
+3)+p$(i,j+2)
1470 f$(i,39+j*4)=p$(i,j+2)+11$(i,j >PM
+3)+p$(i,j+2)
1480 f$(i,40+j*4)=13$(i,j+2)+p$(i,j >DZ
+1)
1490 NEXT:NEXT                      >LC
1500 RETURN                         >EK
1510 '**************************** >XK
****
1520 '***     FIGURES NIVEAU 5      >YA
 ***
1530 '**************************** >YB
****
1540 FOR i=1 TO 2:FOR j=0 TO 2      >VP
1550 f$(i,1+j*4)=11$(i,j+1)+p$(i,j+ >NC
2)+p$(i,j+3)
1560 f$(i,2+j*4)=p$(i,j+1)+11$(i,j+ >NE
2)+p$(i,j+3)
1570 f$(i,3+j*4)=p$(i,j+1)+11$(i,j+ >NG
2)+p$(i,j+3)
1580 f$(i,4+j*4)=p$(i,j+1)+p$(i,j+2 >NJ
)+11$(i,j+3)
1590 f$(i,13+j*4)=12$(i,j+1)        >VL
```



```
1600 f$(i,14+j*4)=p$(i,j+1)+13$(i,j >DU
+2)
1610 f$(i,15+j*4)=13$(i,j+2)+p$(i,j >DY
+3)
1620 f$(i,16+j*4)=12$(i,j+3)        >VK
1630 f$(i,25+j*4)=11$(i,j+1)+p$(i,j >PD
+2)+p$(i,j+3)
1640 f$(i,26+j*4)=p$(i,j+1)+11$(i,j >PF
+2)+p$(i,j+3)
1650 f$(i,27+j*4)=11$(i,j+2)+11$(i, >EL
j+3)
1660 f$(i,28+j*4)=13$(i,j+3)+p$(i,j >DG
+1)
1670 f$(i,37+j*4)=p$(i,j+1)+11$(i,j >PL
+2)+p$(i,j+3)
1680 f$(i,38+j*4)=11$(i,j+2)+11$(i, >ER
j+3)
1690 f$(i,39+j*4)=p$(i,j+2)+11$(i,j >PQ
+3)+p$(i,j+1)
1700 f$(i,40+j*4)=p$(i,j+2)+p$(i,j+ >PY
3)+11$(i,j+1)
1710 NEXT:NEXT                      >HH
1720 RETURN                         >FD
1730 '***************************** >YD
****
1740 '***     FIGURES NIVEAU 6      >YE
 ***
1750 '***************************** >YF
****
1760 FOR i=1 TO 2:FOR j=0 TO 2      >VU
1770 f$(i,1+j*4)=11$(i,j+1)+11$(i,j >DT
+2)
1780 f$(i,2+j*4)=p$(i,j+2)+p$(i,j+1 >YK
)+p$(i,j+3)+p$(i,j+2)
1790 f$(i,3+j*4)=11$(i,j+2)+11$(i,j >DZ
+3)
1800 f$(i,4+j*4)=p$(i,j+2)+11$(i,j+ >ND
3)+p$(i,j+1)
1810 f$(i,13+j*4)=p$(i,j+1)+p$(i,j+ >PA
2)+11$(i,j+3)
1820 f$(i,14+j*4)=p$(i,j+1)+11$(i,j >PC
+2)+p$(i,j+3)
1830 f$(i,15+j*4)=+11$(i,j+1)+p$(i, >QW
j+2)+p$(i,j+3)
1840 f$(i,16+j*4)=p$(i,j+2)+p$(i,j+ >PG
1)+11$(i,j+3)
1850 f$(i,25+j*4)=p$(i,j+1)+13$(i,j >DD
+2)
1860 f$(i,26+j*4)=11$(i,j+1)+p$(i,j >PK
+2)+p$(i,j+3)
1870 f$(i,27+j*4)=p$(i,j+1)+p$(i,j+ >PM
2)+11$(i,j+3)
1880 f$(i,28+j*4)=13$(i,j+2)+p$(i,j >DM
+3)
1890 f$(i,37+j*4)=13$(i,j+1)+p$(i,j >DL
+2)
1900 f$(i,38+j*4)=p$(i,j+2)+p$(i,j+ >PG
1)+11$(i,j+2)
1910 f$(i,39+j*4)=11$(i,j+2)+p$(i,j >PL
+3)+p$(i,j+2)
1920 f$(i,40+j*4)=p$(i,j+2)+13$(i,j >DA
+3)
1930 NEXT:NEXT                      >LB
1940 RETURN                         >FH
1950 '***************************** >YH
****
1960 '***     FIGURES NIVEAU 7      >YJ
 ***
1970 '***************************** >YK
****
1980 FOR i=1 TO 2:FOR j=0 TO 2      >VY
1990 f$(i,1+j*4)=p$(i,j+1)+p$(i,j+2 >YL
)+p$(i,j+1)+p$(i,j+3)
2000 f$(i,2+j*4)=p$(i,j+2)+p$(i,j+1 >YU
)+p$(i,j+3)+p$(i,j+1)
2010 f$(i,3+j*4)=p$(i,j+1)+p$(i,j+2 >YW
)+p$(i,j+1)+p$(i,j+3)
2020 f$(i,4+j*4)=p$(i,j+2)+p$(i,j+1 >YY
)+p$(i,j+3)+p$(i,j+1)
2030 f$(i,13+j*4)=p$(i,j+1)+p$(i,j+ >ZE
3)+p$(i,j+1)+p$(i,j+2)
2040 f$(i,14+j*4)=p$(i,j+3)+p$(i,j+ >ZG
1)+p$(i,j+2)+p$(i,j+1)
2050 f$(i,15+j*4)=p$(i,j+1)+p$(i,j+ >ZJ
3)+p$(i,j+1)+p$(i,j+2)
2060 f$(i,16+j*4)=p$(i,j+3)+p$(i,j+ >ZL
1)+p$(i,j+2)+p$(i,j+1)
2070 f$(i,25+j*4)=p$(i,j+1)+p$(i,j+ >ZL
2)+p$(i,j+1)+p$(i,j+2)
2080 f$(i,26+j*4)=p$(i,j+2)+p$(i,j+ >ZN
1)+p$(i,j+2)+p$(i,j+1)
2090 f$(i,27+j*4)=p$(i,j+1)+p$(i,j+ >ZT
3)+p$(i,j+1)+p$(i,j+3)
2100 f$(i,28+j*4)=p$(i,j+3)+p$(i,j+ >ZK
1)+p$(i,j+3)+p$(i,j+1)
2110 f$(i,37+j*4)=p$(i,j+1)+p$(i,j+ >ZL
3)+p$(i,j+1)+p$(i,j+3)
2120 f$(i,38+j*4)=p$(i,j+3)+p$(i,j+ >ZN
1)+p$(i,j+3)+p$(i,j+1)
2130 f$(i,39+j*4)=p$(i,j+1)+p$(i,j+ >ZN
2)+p$(i,j+1)+p$(i,j+2)
2140 f$(i,40+j*4)=p$(i,j+2)+p$(i,j+ >ZF
1)+p$(i,j+2)+p$(i,j+1)
2150 NEXT:NEXT                      >HG
2160 RETURN                         >FC
2170 '***************************** >YC
****
2180 '***     FIGURES NIVEAU 8      >YD
 ***
2190 '***************************** >YE
****
2200 FOR i=1 TO 2:FOR j=0 TO 2      >VH
2210 f$(i,1+j*4)=p$(i,j+1)+p$(i,j+3 >YW
)+p$(i,j+1)+p$(i,j+2)
2220 f$(i,2+j*4)=p$(i,j+2)+p$(i,j+1 >YZ
)+p$(i,j+2)+p$(i,j+3)
2230 f$(i,3+j*4)=p$(i,j+3)+p$(i,j+2 >YC
)+p$(i,j+3)+p$(i,j+1)
2240 f$(i,4+j*4)=p$(i,j+1)+p$(i,j+3 >YE
)+p$(i,j+2)+p$(i,j+3)
2250 f$(i,13+j*4)=p$(i,j+1)+p$(i,j+ >ZJ
2)+p$(i,j+1)+p$(i,j+3)
2260 f$(i,14+j*4)=p$(i,j+2)+p$(i,j+ >ZM
3)+p$(i,j+2)+p$(i,j+1)
2270 f$(i,15+j*4)=p$(i,j+3)+p$(i,j+ >ZQ
1)+p$(i,j+3)+p$(i,j+2)
2280 f$(i,16+j*4)=p$(i,j+1)+p$(i,j+ >ZQ
3)+p$(i,j+2)+p$(i,j+1)
2290 f$(i,25+j*4)=p$(i,j+3)+p$(i,j+ >ZR
1)+p$(i,j+2)+p$(i,j+1)
2300 f$(i,26+j*4)=p$(i,j+1)+p$(i,j+ >ZK
2)+p$(i,j+3)+p$(i,j+2)
2310 f$(i,27+j*4)=p$(i,j+3)+p$(i,j+ >ZN
1)+p$(i,j+2)+p$(i,j+3)
2320 f$(i,28+j*4)=p$(i,j+2)+p$(i,j+ >ZP
3)+p$(i,j+1)+p$(i,j+2)
2330 f$(i,37+j*4)=p$(i,j+3)+p$(i,j+ >ZQ
2)+p$(i,j+1)+p$(i,j+2)
2340 f$(i,38+j*4)=p$(i,j+2)+p$(i,j+ >ZT
1)+p$(i,j+2)+p$(i,j+3)
2350 f$(i,39+j*4)=p$(i,j+3)+p$(i,j+ >ZW
2)+p$(i,j+3)+p$(i,j+1)
2360 f$(i,40+j*4)=p$(i,j+1)+p$(i,j+ >ZM
3)+p$(i,j+1)+p$(i,j+3)
2370 NEXT:NEXT                      >LA
2380 RETURN                         >FG
2390 '***************************** >YG
****
2400 '***     AFFICHAGE FIGURES     >XJ
 ***
2410 '***************************** >XK
****
2420 BORDER 10+r:FOR i=0 TO 5:FOR j >CM
=1 TO 4:LOCATE 4+i*6,1+j:PRINT f$(1
,j+i*4):PEN 1:LOCATE 3+i*6,4:PRINT
CHR$(65+i):LOCATE 3+i*6,5:PRINT CHR
$(243):NEXT:SOUND 1,120-i*5,10,15,1
:NEXT
2430 FOR i=0 TO 5:FOR j=1 TO 4:LOCA >KL
TE 4+i*6,6+j:PRINT f$(1,(j+i*4)+24)
:PEN 1:LOCATE 3+i*6,9:PRINT CHR$(71
+i):LOCATE 3+i*6,10:PRINT CHR$(243)
:NEXT:SOUND 1,75-i*5,10,15,1:NEXT
2440 PAPER#3,3:PEN#3,2:CLS#3        >WD
2450 RETURN                         >FE
2460 LOCATE 4,14:PRINT"MODELE       >VX
 VOTRE DESSIN"
2470 PEN 2:LOCATE 30,15:PRINT "Nive >LT
au:";r
2480 LOCATE#2,1,1:PRINT#2,"Score: 0 >FH
"
```



```
2490 LOCATE#2,1,3:PRINT#2," Sur: 0 >ED
"
2500 IF t=5 THEN t=0:sc=0:SOUND 1,6 >EV
0,20,15,1:SOUND 1,47,20,15,1:SOUND
1,40,30,15,1:FOR tt=0 TO 500:NEXT:G
OTO 420
2510 '***************************** >YA
*****
2520 '***       AFFICHAGE MODELE     >YB
 ***
2530 '***************************** >YC
*****
2540 N1=INT(RND*12)+1              >PW
2550 t=t+1:RANDOMIZE TIME          >VX
2560 H2=INT(RND*12)+1:IF H2=H1 THEN >GB
 2560
2570 PRINT#1, CHR$(22)+CHR$(1)     >XZ
2580 FOR i=1 TO 4:LOCATE#1,4,i:PRIN >VP
T#1,f$(1,(h1*4)-4+i):LOCATE#1,4,i:P
RINT#1,f$(2,(h2*4)-4+i):NEXT:SOUND
1,63,40,15,1
2590 '***************************** >YJ
*****
2600 '***    REPONSE ET AFFICHAGE   >YA
 ***
2610 '***************************** >YB
*****
2620 FOR i=1 TO 2                  >BK
2630 r$(i)=INKEY$:IF r$(i)="" THEN >EH
2630
2640 R$(I)=UPPER$(R$(I))           >TU
2650 IF r$(i)<"A" OR r$(i)>"L" THE >AG
N PRINT CHR$(7):GOTO 2630
2660 GOSUB 2890                    >YF
2670 PEN#1,2:LOCATE#1,18,i*2:PRINT# >LF
1,r$(i)
2680 NEXT                          >LH
2690 LOCATE#1,6,7:PRINT#1,"Confirme >PQ
z O/N"
2700 r$=INKEY$:IF r$="" THEN 2700  >ZQ
2710 r$=UPPER$(r$):IF r$="O" THEN 2 >DH
750
2720 PRINT CHR$(22)+CHR$(0)        >VG
2730 IF r$="N" THEN SOUND 1,200,120 >EQ
,15,1:PEN#1,0:FOR i=1 TO 2:LOCATE#1
,18,i*2:PRINT#1,CHR$(143):NEXT:LOCA
TE#1,6,7:PRINT#1,STRING$(13,143):GO
TO 2620
2740 PEN#1,2:PRINT CHR$(22)+CHR$(1) >CT

2750 a1=ASC(r$(1))-64:a2=ASC(r$(2)) >EW
-64
2760 FOR i=1 TO 4:LOCATE#1,20,i:PRI >QM
NT#1,f$(1,(a1*4)-4+i):LOCATE#1,20,i
:PRINT#1,f$(2,(a2*4)-4+i):NEXT
2770 LOCATE#2,7,3:PRINT#2,t        >WZ
2780 PRINT#1,CHR$(22)+CHR$(0)      >XJ
2790 IF (a1=h1 AND a2=h2)OR(a2=h1 A >LC
ND a1=h2) THEN 2800 ELSE GOTO 2810
2800 SOUND 1,80,20,15,1:SOUND 1,60, >XP
15,15,1:LOCATE #3,2,1:PRINT#3,"JUST
E":sc=sc+1:LOCATE#2,7,1:PRINT#2,sc:
LOCATE#1,2,7:PRINT#1,"Appuyez sur l
a barre":CALL &BB18:CLS#1:CLS#3:GOT
O 2500
2810 GOSUB 2880                    >YB
2820 SOUND 1,400,40,15,,,7:LOCATE # >PB
3,2,1:PRINT#3,"Faux":PEN#1,3:LOCATE
#1,2,2:PRINT#1,CHR$(64+h1):LOCATE#1
,2,4:PRINT#1,CHR$(64+h2):PEN#1,1:LO
CATE#1,2,7:PRINT#1,"Appuyez sur la
barre":CALL &BB18:CLS#1:CLS#3:GOTO
2500
2830 '***************************** >YF
****
2840 '***        DESSIN CADRES      >YG
 ***
2850 '***************************** >YH
****
2860 PLOT 0,0,1:DRAW 639,0:DRAW 639 >UQ
,399:DRAW 0,399:DRAW 0,0:PLOT 2,2:D
RAW 637,2:DRAW 637,397:DRAW 2,397:D
RAW 2,2:RETURN
2870 PLOT 0,220:DRAW 639,220:PLOT 0 >EL
,222:DRAW 639,222:RETURN
2880 PLOT 30,78,3:DRAW 50,78:DRAW 5 >TP
0,130:DRAW 30,130:DRAW 30,78:RETURN

2890 PLOT 286,78,3:DRAW 306,78:DRAW >AC
 306,130:DRAW 286,130:DRAW 286,78:R
ETURN
2900 '***************************** >YD
****
2910 '***        PRESENTATION       >YE
 ***
2920 '***************************** >YF
****
2930 FOR i=1 TO 37 STEP 4          >QE
2940 FOR j=1 TO 24 STEP 1          >QZ
2950 LOCATE i,j:PRINT f$(1,j MOD 12 >EO
+1)
2960 SOUND 1,INT(RND*8)*5+60,5,10,1 >CZ

2970 NEXT:NEXT                     >LG
2980 FOR i=1 TO 37 STEP 4          >RB
2990 FOR j=1 TO 24 STEP 1          >QE
3000 LOCATE i,j:PRINT f$(2,j+12)   >ZY
3010 NEXT:INK 1,INT(RND*25)+1:INK 2 >BN
,INT(RND*25)+1:INK 3,INT(RND*25)+1:
SOUND 1,INT(RND*8)+5+120,5,15,1:NEX
T
3020 q$(1)="1110111010101000111110l >KJ
1101000111"
3030 q$(2)="1000101010101010001010101 >KC
0001000101"
3040 q$(3)="1000101010101010001010101 >KF
1001000101"
3050 q$(4)="1000101010101010001010101 >KG
0001000101"
3060 q$(5)="1110111011101110101010101 >KW
1101110111"
3070 INK 0,0:INK 1,5:INK 2,20:INK 3 >DG
,15
3080 FOR i=1 TO 5:FOR j=1 TO 33:IF  >RC
MID$(q$(i),j,1)="1" THEN PEN 0:LOCA
TE 3+j,10+i:PRINT CHR$(143):SOUND 1
,400,5,15,2:SOUND 1,0,10,0,0
3090 NEXT:NEXT                     >LA
3100 FOR i=1 TO 30:INK 1,INT(RND*26 >JC
):INK 2,INT(RND*26):INK 3,INT(RND*2
5):SOUND 1,800,5,15,1:SOUND 1,0,10,
15:NEXT
3110 INK 0,0:INK 1,6:INK 2,11:INK 3 >DC
,24
3120 LOCATE 7,20:PRINT "JEU DES MEL >AH
ANGES DE COULEURS"
3130 FOR tt=0 TO 5000:NEXT          >UE
3140 '***************************** >YA
****
3150 '***        EXPLICATIONS       >YB
 ***
3160 '***************************** >YC
****
3170 CLS:BORDER 13:PEN 1:GOSUB 2860 >WE
:LOCATE 2,3:PRINT"Les couleurs se m
elangent:"
3180 p$(1,4)=p$(1,1):p$(2,4)=p$(2,1 >BK
)
3190 FOR k=0 TO 2:FOR i=1 TO 4:FOR  >BR
j=1 TO 4:LOCATE 5+i,5+j+k*6:PRINT p
$(1,k+1):NEXT:NEXT:NEXT
3200 FOR k=0 TO 2:FOR i=1 TO 4:FOR  >DL
j=1 TO 4:LOCATE 13+i,5+j+k*6:PRINT
p$(1,k+2 ):NEXT:NEXT:NEXT
3210 FOR k=0 TO 2:FOR i=1 TO 4:FOR  >TK
j=1 TO 4:LOCATE 21+i,5+j+k*6:PRINT
p$(1,k+1 ):LOCATE 21+i,5+j+k*6:PRIN
T p$(2,k+2):NEXT:NEXT:NEXT
3220 FOR i=0 TO 2:LOCATE 11,7+i*6:P >QX
RINT "+":NEXT
3230 FOR i=0 TO 2:LOCATE 19,7+i*6:P >QB
RINT "=":NEXT
3240 PEN 2:LOCATE 27,6:PRINT"rouge+ >WQ
bleu=":LOCATE 31,8:PRINT"violet":LO
CATE 27,12:PRINT"bleu+jaune=":LOCAT
E 31,14:PRINT"vert":LOCATE 27,18:PR
INT"jaune+rouge=":LOCATE 31,20:PRIN
T"orange"
3250 LOCATE 2,23:PRINT "Appuyez sur >AT
 une touche"
3260 CALL &BB18:CLS:RETURN          >NX
```



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